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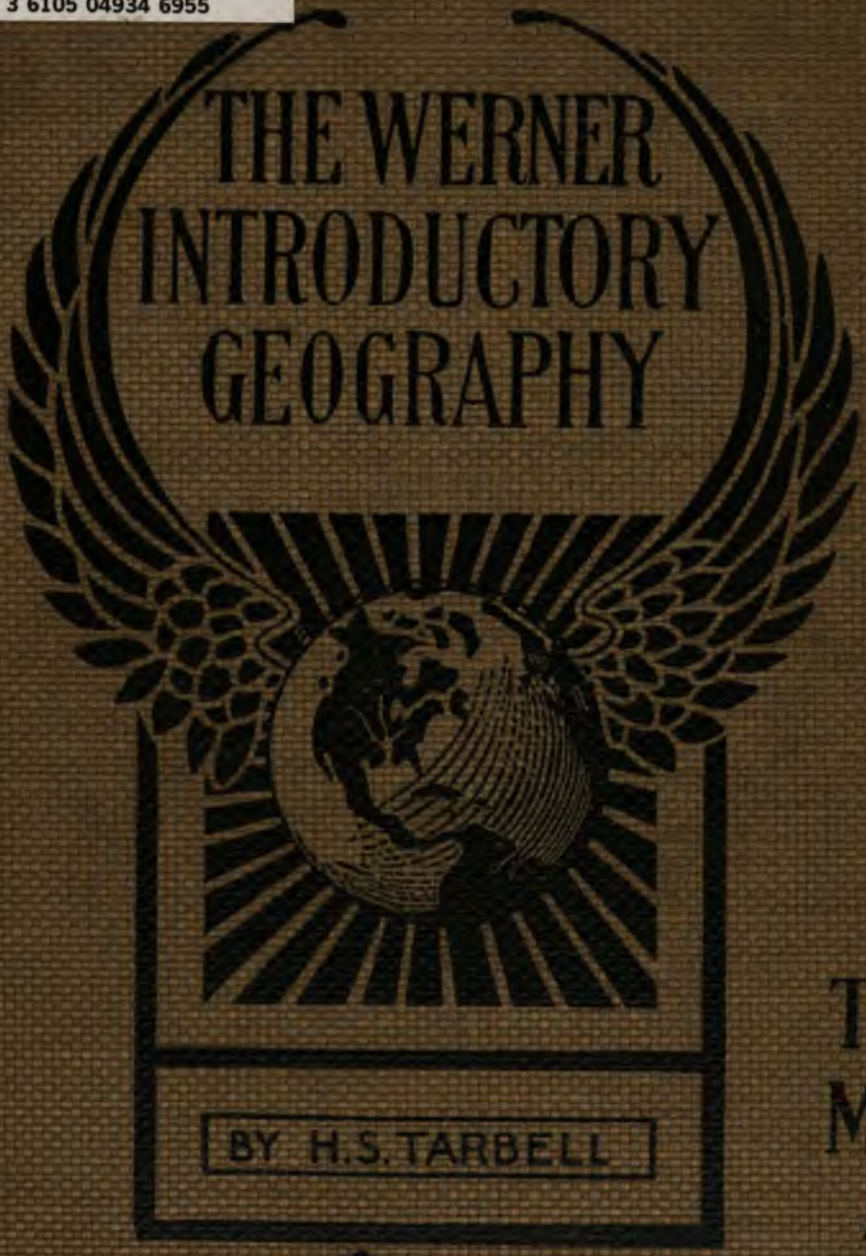
THE WERNER INTRODUCTORY GEOGRAPHY



BY H.S. TARBELL

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THE WERNER

INTRODUCTORY

GEOGRAPHY

BY

HORACE S. TARBELL, A.M., LL.D.

SUPERINTENDENT OF SCHOOLS, PROVIDENCE, R.I.

DEPARTMENT OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

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PREFACE.

In this book an effort has been made to present the facts of geography in such an order and by such a selection that the labor of memorizing may be the least possible, while the exercise of the imagination and of the power of inference shall be as great as the age and advancement of the pupils will permit.

The principle, *what is true of the whole is true of the parts*, has governed the order of presentation. The book is inductive in the earlier parts, but mainly deductive in the later. The elementary notions founded upon experience and observation are introduced at the beginning. These are followed by a study of the methods of representing geographical facts.

When the child becomes acquainted with the geographical facts that may be known through his own experience at his home and in its vicinity, he needs to learn how these facts are represented upon maps, in order that from maps he may learn the geographical facts relating to other localities. When he can do this, he is ready to study geography from a book.

At this point of his advancement the earth, represented by the globe, is presented to his view as a unity to be studied, and thereafter his study is largely a descent from the general to the particular.

The location, size, and direction from each other of the several important bodies of land and water have been introduced early, so that information gained later might find the mind ready to receive and distribute it to proper centers. Unusual prominence has been given to the consideration of climate — its dependence upon latitude, elevation, prevailing winds, etc., and its influence upon plant and animal life, and to a large extent upon human life as well.

The causes which have produced the effects discovered are pointed out so far as they can be apprehended by children. Sometimes a direct statement of a fact upon which many things depend has been given without explanation of its cause or reason, when the cause or reason might not be readily understood by the pupil.

While the details to be memorized have been reduced to a number much smaller than usual in such books, general principles and important general facts have received

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unusual prominence. There is very little of what Dr. Harris so aptly calls "sailor geography."

Physiography, or elementary physical geography, is made the foundation of the study. Relief is given its due prominence, but not excessive attention; while industrial and commercial geography, dependent largely on physical geography and closely connected with human interests, are made more prominent. Political geography is treated with less than the usual fulness because the occasion of its facts cannot be readily understood, except from a study of both physical and economic geography on the one hand and of history on the other.

Children are interested in home life, so the life of the people in their homes has been treated quite fully in this first book of the series.

The spelling of geographical names adopted in this book is that of The United States Board of Geographic Names; the pronunciation that of "The Century Cyclopedia of Names."

The author and publishers are under deep obligation to Superintendent C. B. Gilbert of St. Paul, Minn., and to Miss F. Lilian Taylor of Galesburgh, Ills., who read both MS. and proof and made many valuable suggestions; also to Hon. Orville T. Bright, Superintendent of Schools, Cook Co., Ills., who read the proofs and gave the author the benefit of his wide knowledge of schools and text-books. The treatment of map drawing, both text and illustrations, was prepared by Miss Taylor, well known in her own state as instructor in institutes. The relief maps were drawn by Miss Louise Barwick, for some time instructor in geography in the Chicago Normal School, Ills.

The drawings for the illustrations of this book were made by Mr. True Williams of New York, and the engravings by Mr. John F. Richardson of Boston, Mass. The result of the excellent taste and skill of these artists will be appreciated by all.

The Werner School Book Company has shown great liberality and given unstinted personal assistance in every stage of the preparation of this book. The artistic character and mechanical perfection of the book are proofs of careful forethought and large expenditure on the part of the publishers.

The author feels his obligation to many teachers not named herein for help and suggestions. But in the preparation of the text and in the selection of the illustrations he has been aided chiefly by his daughter, Miss Martha Tarbell, A.M., who for five years has given her time and thought to this work and to whom its merits are largely due.

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THE WERNER
INTRODUCTORY GEOGRAPHY.

1. Geography.

GEOGRAPHY tells you about the earth on which you live and of the things that may be found on the earth. It tells you about plants and animals; and about peoples, — where and how they live, their cities and countries, their farms and mills, their ships and railroads.

You already know much about geography. You know that the gardens, fields, and your playgrounds are land, and your home and schoolhouse are on the land. You also know where there is water, — either some stream of water or some body of water. You know about the air which we breathe, and in which we move. The birds fly in the air, the clouds float

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in the air. The land, the water, and the air make up the great world in which we live.

2. Direction.

When you study about people and places upon this earth, you will wish to know, among other things, which way they are from you, and how far away they are.

Some places are north of us, some are south, some are east, and some are west. Do you know which way is north?

The words north and south, east and west, tell which way places or things are from other places or things, and are called *directions*. In which direction does your schoolhouse face?

Can you mention anything that is north of the schoolhouse? South? East? West?

DIRECTIONS.

In this country scene the sun is just rising. In which directions is the boy pointing? In which direction does each road run?

The sun rises in the east, and sets in the west. Remembering this will help you to know which way is east and which is west. The shadow of a post, or of any upright object, at noon points to the north; and a line from the foot of the object to the end of the shadow will be a north and south line.

When you face the east, your right hand is toward the south, your left hand toward the north, and your back toward the west.

Which is the north side of your schoolroom? The south side? The east side? The west side? Point to the east; the north; the west; the south.

If you face the north and turn to the opposite direction, in which direction will you then face? If you face the north and turn a quarter way round to the right, in which direction will you then face? If you face the north, in which direction will you face when you turn to the left a quarter way round? Which direction is opposite north? Which direction is opposite east? South? West?

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3. Points of the Compass.

The directions, north, south, east, and west, are sometimes called *points of the compass*, because we use an instrument called a *compass* to show us these points or directions.

Here are pictures of compasses. Do you see the points of the compass marked on their faces? In whatever position the compass is placed, the needle always points nearly north and south.

THE MARINER'S COMPASS.

Sailors use a compass to tell them in which direction they are sailing.

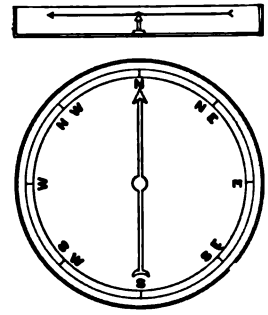
The direction half-way between north and east is called northeast. Point to the north; the east; the northeast. Point to the east; the south; the southeast. Point to the south; the west; the southwest. Point to the north; the west; the northwest.

In which direction do you go when on your way to school? When on your way home?

Place a cylinder and a cube on your desk so that the cube is north of the cylinder.

Place the cylinder east of the cube. In which direction is the cube from the cylinder? Place the cylinder one inch south of the cube. Point to a place on the desk that is north of the cylinder and south of the cube.

On which side of you does your shadow fall as you come to school on a bright morning? On which side of you does your shadow fall as you go home at the close of school at noon? At the close of school in the afternoon? In which direction does your shadow fall in the morning? In which direction from you is the sun at that time? At what time in the day does the sun seem to be southeast of you? Which way does your shadow fall then? At what time in the day does the sun seem to be southwest of you? Which way does your shadow fall then? In which direction from you is the sun at noon?



THE POCKET COMPASS.

Long ago, people had no clocks nor watches. They told the time of day by noticing the shadows cast by the sun.

You have learned how to tell direction in the daytime by the sun. In the night the North Star shows which way is north. You must ask some one to show you the Great Dipper in the sky, and the two pointers which point out the North Star. This star seems always to be in the same place, and all the other stars in the north seem to go round it.

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Point to the Great Dipper and the North Star in this picture.

THE GREAT DIPPER.

When people can see neither the sun nor the stars, and when they wish something more convenient to show exact directions, they look at the compass.

4. Distance.

Draw a line an inch long. Draw beside it a line a foot long. Which is the longer, an inch or a foot? How many feet long is a yardstick? The inch, the foot, and the yard are used to measure short distances. Do you know what measure is used for long distances, such as the distance from one town to another?

How far from the schoolhouse do you live? Who lives a quarter of a mile from the schoolhouse? Who lives half a mile from the schoolhouse? Name something that is about a mile distant.

How long will it take you to walk a mile? Try it some time, and find out. Do you know of any place about five miles from here? How many miles from home have you ever been? Where did you go?

5. Time.

You can tell the time by a clock. How do the hands of a clock stand at noon? How at midnight? When does Monday end and Tuesday begin? How many hours from midnight to noon? From noon to midnight? From midnight to midnight again? How many hours in a day? How many days in a week? In which month is your birthday? How many days are there in that month? How many days in a year? How many months in a year?

Which are the cold months? Which are the warm months? Is it colder in summer or in winter? What seasons are there besides summer and winter? How many seasons are there in a year? What are the months in each season?

Did you ever see the sun rise? At what time in the morning did it rise? Does it always rise at just that time? To see the sun rise must you get up earlier in the summer or in the winter?

When the sun rises early, does it set early or late? Are the days

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longer in summer or in winter? Is it colder, usually, in the daytime or in the night time? Do you think the long summer days make the weather warmer than it would be if the days were short?

6. Plains.

Do you know what the word *level* means?

Your schoolhouse floor is level, and the school grounds are nearly level.

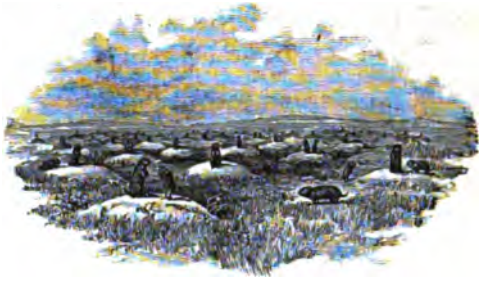
A SCHOOLHOUSE.

A broad piece of land level or nearly level is called a *plain*. In this picture the schoolhouse stands on a plain.

Plains are called by different names in different parts of the earth.

Plains that are very high are called *plateaus*, or *tablelands*. These are cold plains, for the air surrounding the earth is colder the higher it is.

Some very large plains in the central part of our country are called *prairies*. Many of them are covered with grass upon which herds of horses and cattle feed. On other prairies great fields of corn and wheat grow.



A PRAIRIE-DOG TOWN.

On some of the prairies there are prairie-dog towns, like the one shown in this picture. Prairie dogs look a little like rabbits. They are called dogs because they make a barking noise as a dog does. Do you see how close together they build the mounts in which they live?

A SWAMP.

Plains that are very wet are called *swamps*, or *marshes*. What do you see in this picture of a swamp?

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Very dry plains are called *deserts*. Such plains are barren places; for plants cannot grow without moisture.

Some deserts are so large that people traveling across them are many days on the journey, and have to carry water for themselves and their animals to drink. Do you suppose that roads are made in the desert? Give reasons for your answer.

A DESERT.

You must not think of these different kinds of plains as being perfectly level and having no uneven places in them. When they are very large the greater part of their surface is level, but there are perhaps in them many elevations, or places higher than the rest. In a great desert there are occasionally large elevations surrounded by land that is lower and somewhat level.

Name the different kinds of plains and describe them.

7. Slopes, Hills, and Mountains.

All land is either level or sloping. Land nearly level, as you have learned, is called a plain. Sloping, or slanting, land is called a *slope*.

Is your schoolhouse situated on a plain or on a slope? Does the land rise in any direction from it? Is there any high ground near your home or schoolhouse to which you can go and see very far away?

Land considerably higher than the surrounding land is called a *hill*. If you go to the very *top* or *summit* of a hill, you can look far away, much farther than from the bottom of the hill. When you go down from the summit, you pass over the side or slope of the hill, until you come to the foot or *base* of the hill. The base of the hill is at the lower end of the slope, and

A HILL.

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is the place where the slope begins to rise.

In the picture of a hill on the opposite page, point to the foot or base.

The summits of the highest mountains are covered with snow throughout the year. What do you know about the air upon mountain summits? Have you seen any hills, mountains, or slopes?

A MOUNTAIN SYSTEM.

This picture shows you a mountain system, two mountain ranges, a very pointed peak, a river, and a plain. Point to each.

What other pictures of mountains, hills, or plains can you find in this book?

Bring to school if you can, pictures of mountains, hills, or plains, or any other pictures that will illustrate what you are studying. Show by your pictures, and those which other pupils have brought, that you know the difference between a hill and a mountain, a mountain and a plateau, a range and a system. Describe these pictures and tell the differences between them.

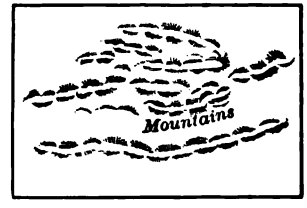
Point to the summit. To the slope.

A large mass of land with steep slopes and a narrow top is called a *mountain*.

A mountain differs from a hill in being higher. It differs from a plateau in having a narrower top and steeper slopes. Mountains are usually in rows or *ranges*. Two or more ranges side by side make a mountain *system*.

Single mountains standing alone or in ranges are sometimes called *peaks*. Some peaks are pointed and others are rounded.

With a little sand, or sawdust, or clay, you may build upon your slate or a molding-board a model of a hill. If you build up a model of a hill and flatten the top, what may you call the level place on top?



Here is a picture which shows you how mountains should be drawn. Point out the mountain system. The mountain range.

Draw a mountain system.

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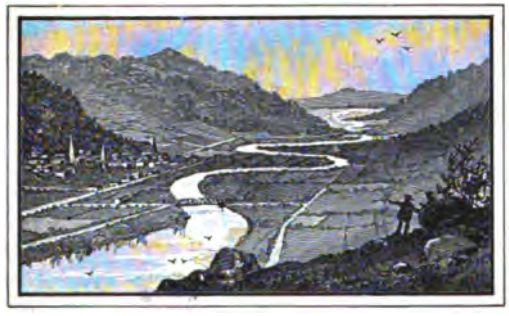
8. Valleys, Brooks, and Rivers.

You have seen how quickly a heavy shower washes the dirt from the roads into the gutters, and what a muddy stream pours along by the side of the roadway after a rain. Each drop of water in the stream is filled with little particles of dust or sand or clay, and acts as a tiny boat to carry its load



A VALLEY.

to some lower place, where it may put it down. This little load it has gathered up from the ground over which it flowed. Taking away these little loads has left a hollow in which the water runs. If the stream runs through sand or loam or mud, then the soil on the sides of the stream is loosened and falls into the water, and is carried away by the current. If the water runs over soft rock it will at length make for itself a deep and narrow course, called a *ravine*.

The current of water washes away the soil first on one side of the ravine and then on the other, broadening and deepening it, until at last it becomes so wide that it is called a *valley*.

Streams of water which flow through valleys are called *brooks* or *rivers*. A river is a stream of water larger than a brook. The rain falling on the land makes the stream, and the stream digs out the valley.

Have you seen a brook? A river? Do streams flow in a straight line through the land? You may show by a drawing how a river flows.

Have you any pictures that show rivers? Point to the rivers; the valleys. Show the main valley; the side valley.

While the river has been forming the main valley, the smaller streams, called *tributaries*, running into it, have each been cutting away its side valley, and this widens the main valley. The valleys of some great rivers have been formed in another way, as you will learn later, but even in them this process of soil-carrying is still going on.

When the valleys of two large streams are not far apart, the ridge of land between them is sometimes cut across by the side streams or tributaries of these rivers. This changes the ridge into rounded elevations, or hills. In this way most of our hills

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have been made during the very long time that the rivers have been cutting down their valleys. From this it may be seen that all the land between the hills was once as high as the tops of the hills or higher, and that the water has cut it out and carried it away to some lower place. Almost all narrow valleys have been made by the streams which run through them.

Does the ridge between valleys become wider or narrower year by year?

Do the side valleys gradually become longer or shorter? Why?

If the side valley of one stream has the side valley of another stream opposite it, and both streams keep digging back the heads of the valleys, what will finally happen?

If side streams cut across the ridge between two main streams, into what will the ridge be changed?

9. Soil.

Take a tall glass jar; get a handful of soil from the fields or roadside. Make the soil fine by rubbing it in your hands. Fill the jar nearly full of water, and then stir in the soil. Most of the soil and all the pebbles, the coarse gravel, the fine gravel, and the sand, sink quickly to the bottom, while the muddy water remains at the top. Were you to pound up the pebbles they would make coarse gravel. Gravel can be made into sand by pounding it with a hammer. If rocks are rolled about by a stream of water, what change is made in their shape? What becomes of the particles that have been ground off?

If muddy water runs more slowly or becomes still in a pond, what happens to the pebbles, the sand, and the mud which it was carrying along?

All our soil is made from rock. It is crumbled rock. Some soil is found on the spot where it was made by the crumbling of the rock, and some has been carried to its present place by wind, ice, or water.

All land is rock, or soil resting upon rock.

How fast soil forms depends mainly upon the kind of rock, for some kinds of rock break up into soil much more readily than others. On steep rocks the soil is washed off as fast as formed, and such rocks are usually bare.

Soils are of different kinds, depending on the kind of rock from which they have been made and on the changes that have taken place in them. Some kinds of rock when worn down produce sand, others clay. These are the two main kinds of soil. When these two kinds are mixed, they make a soil that is better than either of them alone. Such a mixture made fertile

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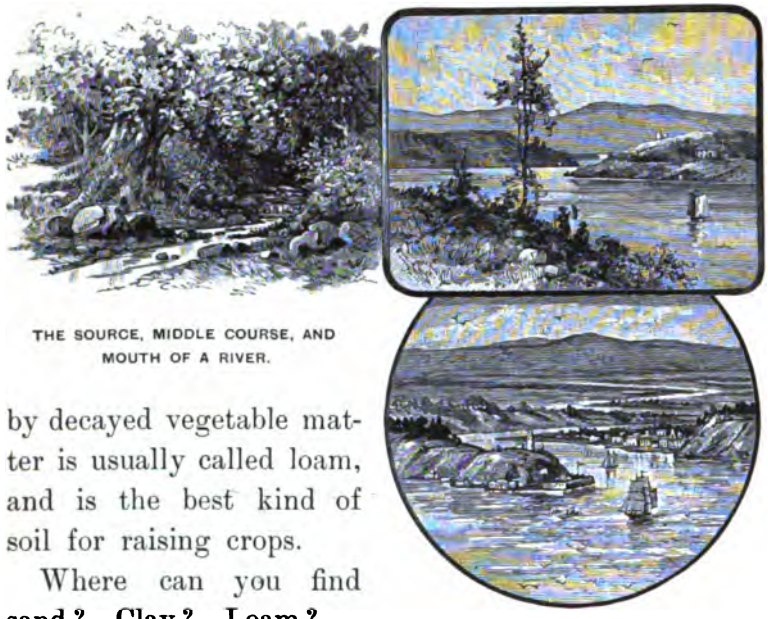

THE SOURCE, MIDDLE COURSE, AND MOUTH OF A RIVER.

by decayed vegetable matter is usually called loam, and is the best kind of soil for raising crops.

Where can you find sand? Clay? Loam?

Through which does the water run more easily, sand or clay? What are some of the uses of sand? Some of the uses of clay? What differences between sand and clay do you know? What kind of soil would you find in a garden?

Soil supports plants which grow in it. It both holds the plant and feeds it. Good soil, warmth, sunlight, and moisture are the things that plants specially need. Soils that contain a large amount of plant-food are called fertile; those that contain very little are called sterile.

Soil is sometimes called earth; the great ball on which we live is called the Earth.

10. More About Rivers.

If you should follow a river until you came to its *source*, or the place from which it begins to flow, you would probably find a little spring of water bursting out of the ground. The rain sinks into the ground until it is stopped from going farther by something through which it cannot pass, rock perhaps. The water collects in the earth until there is no longer room enough for it, and then it forces itself out in a bubbling spring. The tiny stream flows down the valley, other small streams join it, and at last all of them unite to form a great river. A river may be small at its source, but sometimes it is many miles wide at its *mouth*, where its waters flow into some other stream or body of water.

The ground over which a river runs is called its *bed;* that part of the bed in which most of the water runs is called its *channel.*

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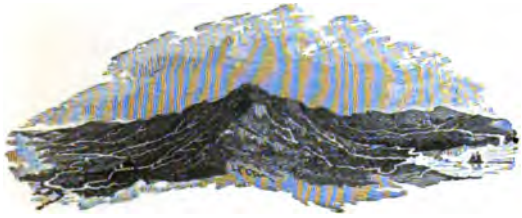
You know that a stream is kept in its bed by its *banks*, which are the land on each side of the stream. The *right bank* of a river is the bank on the right hand, and the *left bank* is



A DIVIDE.

the one on the left hand, as you go down the river. If you sail up a river, is the right bank on your right hand or on your left?

Is there some stream of water near your school? Point out its banks, its bed, its channel. In which direction and where is its source? Its mouth? Has it any tributaries?

You may show with the chalk how a river widens as it flows. Draw a narrow line at first, then hold the chalk with a firmer grasp so that the line shall gradually become broader and stronger. Show tributaries flowing into this river. Draw a river, and mark its source, mouth, right bank, left bank.

Every river valley must have three slopes; one of these slopes is down to the right bank of the river, one down to the left bank, and one toward the mouth of the river. The last is called the main slope of the valley. Sometimes these slopes are so nearly level that it is difficult to see in which direction the land is higher, but the water always finds its way to the lower level.

Hold your book so as to represent[1] a valley with its three slopes. Let the valley slope from you. Let it slope toward you. When the book is so held before you as to have the main slope toward you, is the right bank of the stream on your right hand or your left? How is it when the book is held so that the slope is from you?

The ridge of land which *divides* one valley from another, is called a *divide*. Sometimes also it is called a watershed or a water-parting. Why?

RAPIDS.

When rain falls upon the roof of a house, the ridge, or the highest part of the roof, acts as a watershed, causing part of the water to run down one side and part down the other.

Hold your book so as to represent a watershed. How many slopes has a watershed?

[1] *Represent:* to show, to bring before the mind.

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Do the slopes of a valley unite at their upper or their lower edges? The slopes of a watershed? Illustrate with your book.

The ridge of a hill is the watershed for the streams that run on either side of it.

A main river with its tributaries is called a *river system*. The land drained by a river system is called the *basin* of the main river of the system.

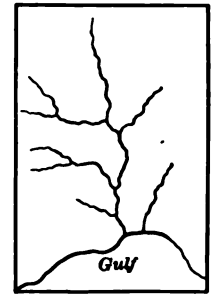
You yourselves can tell what *rapids* are and what a *waterfall* is. A small

FALLS.

waterfall is sometimes called a *cascade*, and a large waterfall, a *cataract*.

Does the water descend more rapidly in a waterfall or in rapids? What kind of slope causes rapids?

Here is a drawing which shows a river system and a single river. You may copy it and then sketch faint lines to show the ridge of land, or the divide, between the streams of water.



Can you tell whether the land through which these rivers flow slopes toward the gulf or away from the gulf?

Which side of the river has the steeper slope?

11. Land and Water Forms.

As streams flow along over the ground they sometimes find hollow places into which they run, and which they fill with water. Do you know any such places? A body of water filling a low place in the land is called a *pond*. A very small pond, such as you sometimes see in the yard after a rain, is called a puddle. A very large pond is called a *lake*.

Is a pond or a lake surrounded by land? What is the land under it called?

The land along the side of a pond or a lake is called its *shore*.

Along the shore of a pond the grass often grows very high, and sometimes there are rushes at the edge of the water. What animals do you expect to find on the shore of a pond? What living things can you find in a pond?

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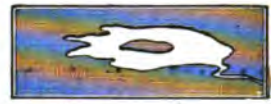
Some lakes are very large. In the northern part of our country there are lakes so large that sailing vessels are often out of sight of shore for days when crossing them.

With sand or some other material, as your teacher directs, represent a mountain and a plain; represent a valley with a stream of water in it running to a lake. Make drawings to show the same things. Within the lake show two bodies of land. Let one of them stand alone in the water. Land entirely surrounded by water is called an *island*. Connect the other body of land to the land at the side of the lake by a little neck of land. Land nearly surrounded by water is called a *peninsula*. Land connecting a peninsula with the mainland is called an *isthmus*.

Here are two pictures, each of which represents the same island, lake, and

PICTURE OF LAKE AND ISLAND.

land around the lake. The first picture also shows you the bare ground, the rocks, trees, and houses, while the second merely represents the land and the water.



MAP OF LAKE AND ISLAND.

Some islands are very small, being perhaps only a big rock in the water, while others are large enough to be the home of many thousands of people.

CORAL ISLAND.

CORAL.

There are some islands that have been built by little animals called *polyps*. These little animals take in the lime that is in the water. This lime forms solid walls within their bodies. These walls are called coral. After countless numbers of years, during which countless numbers of polyps have lived and died, each leaving the coral that had been formed in its body, the mass of coral finally reaches the surface of the water, and thus an island is made.

The waves break up the coral on the top of the island and leave upon it bits of floating

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wood and seaweeds, which decay, and together with shells and broken coral form a soil upon the coral foundation. The winds, the waves, and the birds bring seeds, some of which grow. The birds make their nests upon the island, and after long ages it becomes fit to be the home of man.

12. Other Forms of Land and Water.

The shores of a body of water are not everywhere straight. In some places the land extends into the water; in others the water extends into the land. A point of land extending into the water is called a *cape*. A high cape is called a *promontory*.

PICTURE OF PENINSULA AND ISTHMUS.

MAP OF PENINSULA AND ISTHMUS.

What can you see in both of these pictures? What does the first one show you that the second one does not?

A body of water extending into the land from a larger body of water is called a *bay*, and the narrow body of water connecting two larger bodies of water is called a *strait*. What body of water does an isthmus resemble? Why? Some large bays are called *gulfs*. Gulfs, bays, and lakes are sometimes called *seas*.

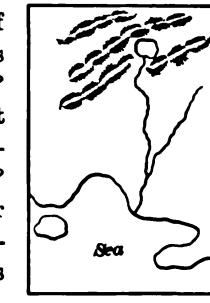
PICTURE OF BAY AND STRAIT.

MAP OF BAY AND STRAIT.

What do these two pictures show you? How does one differ from the other? Where are the capes?

If a strait were cut through an isthmus, what would the peninsula become?

You may copy this drawing, and write by each form of land its name. Write the name of each form of water shown. What forms of land not shown in this drawing can you name? What forms of water not shown? In what direction does the river run? On which bank of the river is the mouth of its tributary? Do you think this is a swift-flowing river?



Make another drawing showing an island, a strait, a peninsula, and an isthmus.

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REVIEW QUESTIONS.

[*To the Pupil.*—Read over these questions and think what answers you would give if your teacher should ask them. If you cannot give a good answer, turn to the page where the information can be found, and study it once more. You must think out for yourself the answers to some of the questions, for the book does not give the answers to them all.]

In which direction does a shadow fall at noon? Does a shadow fall in just the same direction at sunrise every day in the year? Notice where the shadow of some object falls at sunset on different days, and see whether the shadows all fall in exactly the same line.

In what season of the year is the noon shadow of an object shortest? Longest? Does the sun ever cast a shadow toward the south?

What is the opposite direction from northeast? From southeast? From southwest? From northwest? Name something northeast of you.

What is a plain? What kinds of plains can you mention? What is a plateau? Are swamps usually near a body of water or a stream of water? Are deserts usually near a body or a stream of water?

What is the difference between a hill and a mountain? Between a mountain and a plateau? Between a hill and a plateau? What is the slope of a hill or mountain? Do plateaus have slopes? Do meadows? What is the difference between a mountain range and a mountain system?

What is a brook? A river? A valley? What is the difference between a valley and a plain? Between a valley and a ravine? How many slopes has a valley? How are valleys made? What is a spring? What is a tributary? What is the difference between the bed of a river and the banks of a river? Between the bed of a river and the channel of a river? What is a divide? Is a divide usually high land or low land? What is the difference between a river and a river system? Between a river system and a river basin? What is the difference between rapids and a waterfall? Between a cascade and a cataract?

What is the difference between a brook and a pond? Between a pond and a lake? Between an island and a peninsula? Between a peninsula and a cape? Between a peninsula and an isthmus?

Compare a pond and an island, a gulf or bay and a peninsula, an isthmus and a strait.

What is the difference between banks and shores? Which of the objects referred to in the questions above have you seen?

13. The Making of Maps.

How long is the top of your desk? How wide? Make a drawing of the top of your desk. Is the picture you have drawn as large as the top of your desk? Draw the picture one-fourth as long and one-fourth as wide as your desk. If your desk is twenty inches long, how long will your picture be?

On the next page is a picture of a schoolroom and also a plan of the same schoolroom. Are just as many desks represented in one as in the other? Are the platforms and the windows in the same place in each?

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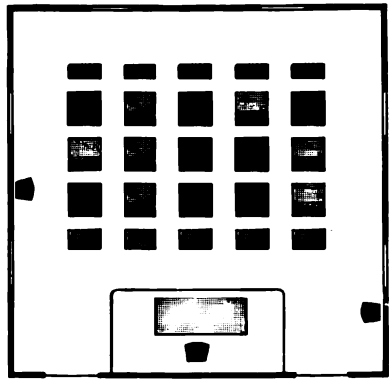
How long and how wide is your schoolroom? Draw a plan of the floor of your schoolroom, and show the teacher's table and the desks of the pupils in their proper places. Let one inch in your drawing represent four feet of the schoolroom.

A SCHOOLROOM.

Make upon the board a drawing four times as long and four times as wide as the one you have last drawn upon your slate. How many feet of the schoolroom does one inch of your blackboard drawing represent?

Make a plan of the floor of your schoolhouse.



FLOOR-PLAN OF SCHOOLROOM.

In the drawings you have already made, how many inches along your desk did one inch of the drawing of your desk represent? How many feet along the floor did one inch of your floor-plan represent? How many feet did each inch of your house-plan represent?

The answers to these questions have given you the *scale* of the several drawings. What was your first scale? [*Ans.* One inch represented 4 inches.] What was your second scale? What was your third scale?

If you draw the schoolhouse grounds, will you use the same scale which you used when you drew the floor plan of your schoolroom? Why?

Draw the boundary of the schoolhouse grounds, and let one inch in your drawing represent twenty-four feet of the boundary line. What is your scale?

If you live in a city, make a drawing of some of the blocks or squares about the school grounds. If you live in the country, draw the schoolhouse grounds and the roads leading to it, with some of the farms on each side of the road.

These drawings may be called *maps*.

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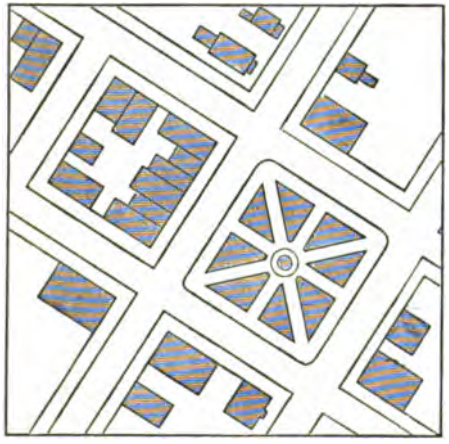
Here is a picture and a map of part of a city.

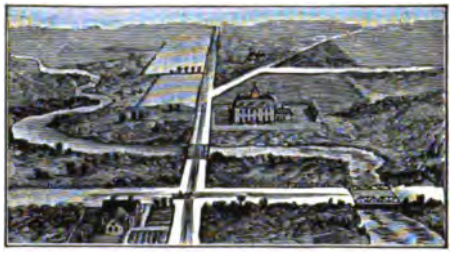
PICTURE OF PART OF A CITY.



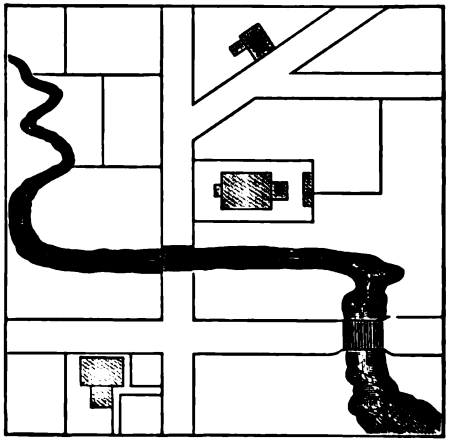
MAP OF PART OF A CITY.

A picture shows how things appear; a map or plan shows where things are and their distance and direction from one another. Maps are usually drawn so that the top of the map represents the north, the bottom the south, the right hand side the east, and the left hand side the west.

This is a picture and a map of a school district in the country.



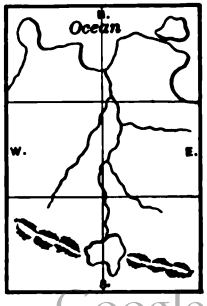
PICTURE OF A COUNTRY DISTRICT.



MAP OF A COUNTRY DISTRICT.

14. Map Drawing.

Here is a map divided into half-inch squares. How many square inches does it contain?



Each half-inch stands for one hundred miles. How many miles long do you think each stream of water represented is? Should you go in a boat

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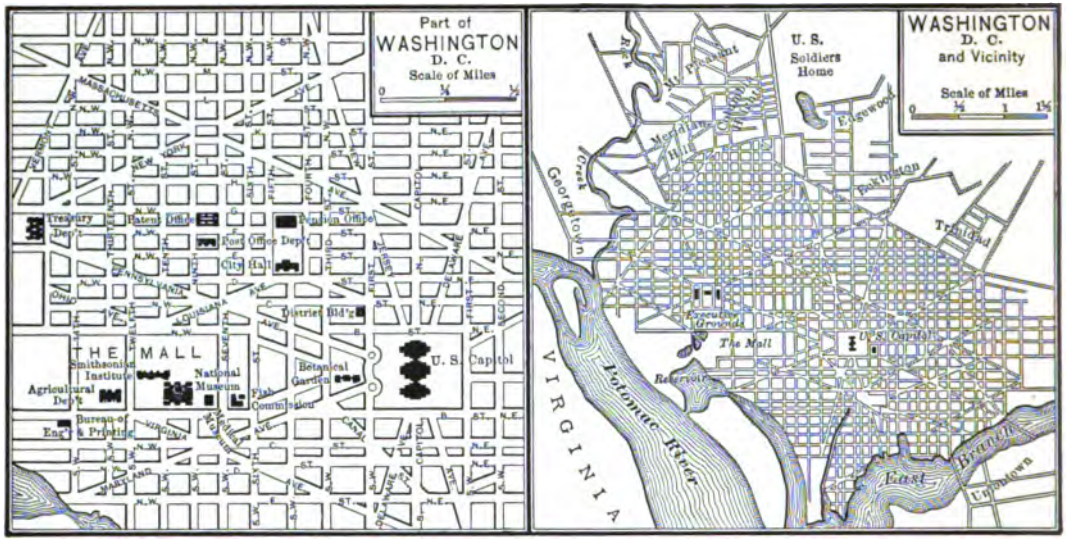

from the source of the longest river to its mouth, how far would you travel? In what direction would you go?

If you should go from the lake to the ocean in a carriage, would most of your journey be up hill or down hill? Why?

In what direction do the mountains extend? In what direction does the tributary flow which has its mouth in the left bank of the river?

I. Draw a coast line extending nearly north and south, showing a bay, a peninsula, and an isthmus. East of the coast line write the word *sea*. Draw two islands off the coast separated from the land by straits. Let a promontory extend from one of the islands into the ocean.

Draw a range of mountains extending from northeast to southwest. In the southwestern part of the map draw a lake. Let this lake be the source of a river which flows into the ocean.

Draw one tributary flowing north, and another flowing east.

II. Draw a river flowing southeast into a bay. Complete the map by showing a mountain system and a river system. Tell the direction of the coast line and of the mountains. Which way does the land slope?

III. Draw an island in the northwestern part of the map. Let this island be separated from the land by a strait. Draw a river rising in a lake and flowing into the ocean east of the strait. Show two peninsulas, one isthmus, two lakes, and four tributaries. Tell what you can about this map.

The first map above shows some of the streets of Washington, one of the beautiful cities of our country. Notice the scale in the upper right-hand corner. About how many square miles are represented in this map?

The second map represents the entire city of Washington. Is the scale the same as in the first map?

What part of the third map is occupied by the map of Washington? How does the scale compare with that in the second map?

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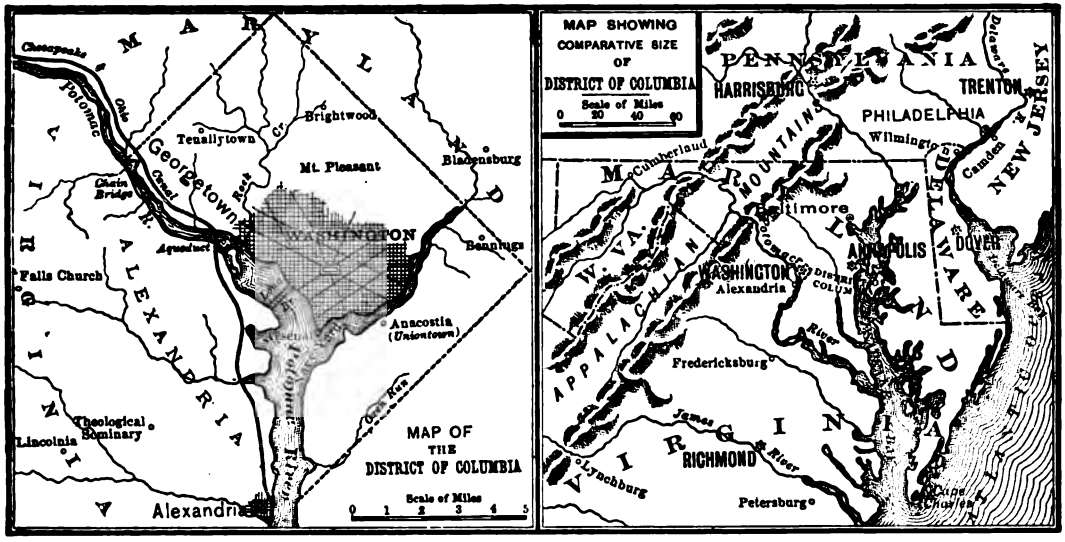

Find Washington marked on the last map. How is it represented? How many other cities are represented? How are the mountains represented? How many square miles are shown in this map? Do all maps of the same size represent equally large bodies of land or water?

15. The Globe.

You have studied for some time about a little spot of earth near your schoolhouse and your homes.

The land and water that you have seen about you are a part of the great earth on which you dwell.

You will understand many things better if you now study about this earth and learn to think of it as a huge ball of land and water surrounded by air, and moving among the stars. How large this ball is you can hardly realize, but you can know that it is round, and has people living on it and traveling over it in many directions by wagons, cars, and ships.

On page 7 is a picture of this earth, and you can see its shape.

The earth being a big ball is often represented by a small ball called a *sphere* or *globe*, which is of the same shape as the earth.

16. Motions of the Earth.

If you throw a ball into the air, it will turn as it moves. Try it and see whether this is true.

The ball which you throw has two motions, one forward and one turning in the air.

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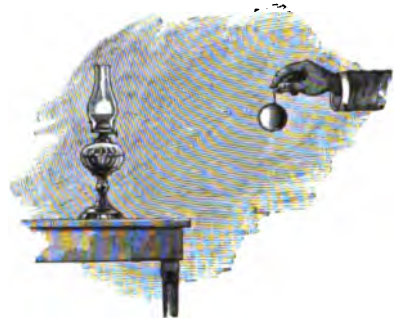
The earth has two motions like the ball in the air; one a forward motion around the sun, the other a turning motion like that of a wheel or ball or top.

The earth goes around the sun once a year.



There are a few bright stars in the sky that go around the sun just as the earth does. Some go faster and some go slower than the earth. Most of the stars which we see in the sky are like our sun, but are much farther away from us than the sun is, and so do not appear so large and bright.

There are two points on the surface of the earth which do not turn, but around which, or around the line connecting them, all parts of the earth move.

These two points are called the *poles* of the earth, and the line that connects them is called the earth's *axis*.

One of the poles is called the north pole, the other the south pole.

Run a knitting needle or wire through an orange, and think of the orange as representing the earth and the wire as representing its axis. Let a lamp represent the sun, and hold the orange in the light of the lamp as is shown you in this picture. The part of the orange on which the light falls will represent the part of the earth where it is day, and the part in the shadow will represent the part where it is night.

The earth turns on its axis once in twenty-four hours, which make a day. Sometimes the word *day* means the hours between sunrise and sunset, and then *night* means the time from sunset to sunrise. Sometimes *day* means twenty-four hours and includes both daytime and night time.

It is the turning of the earth on its axis that makes the sun appear to rise and set. Where does the sun rise? Where does it set? Which way, then, does the earth turn?

On what part of the earth is it daytime? Night time?

17. Continents and Oceans.

On the next page are two maps of the globe. Each of these maps shows one side or one half of the globe. Half of a globe or sphere is called a hemisphere. The map on the right hand is of the Eastern Hemisphere, and the other is of the Western Hemisphere.

The dark portions represent land, and the light portions, water.

Point out the land; the water.

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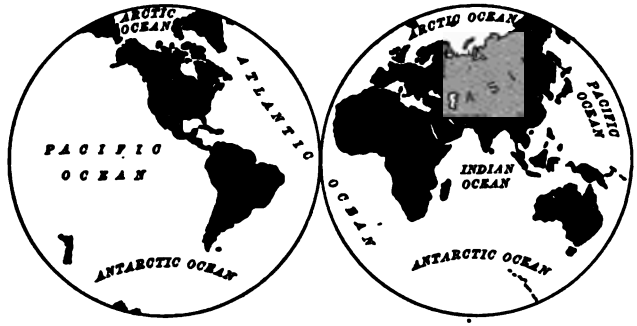
18. Continents.

How many masses of land are named on the map of the hemispheres? The six largest divisions of land are called continents. The continents make three large bodies of land. Europe, Asia, and Africa together make the largest body of land on the earth. North America and South America make the next largest body. Australia is the smallest of the continents.

Europe, Asia, and Africa are sometimes called the Old World. North America and South America are called the New World, because they were not known to the people of Europe until discovered by Columbus in 1492. On which continent do you live?



WESTERN HEMISPHERE. EASTERN HEMISPHERE.

19. The Oceans.

The great body of water covering about three-fourths of the earth's surface is called the *Ocean*. For convenience, certain parts of the Ocean are themselves called oceans and have particular names.

There is an ocean around each pole. The one around the north pole is called the Arctic Ocean, and the one around the south pole is called the Antarctic Ocean. Point out these two oceans on the map.

There are two oceans, one east of America and one west, which extend between the two polar oceans. What name is given to the ocean east of America? To the ocean west of it? What land is on the east of each ocean? On the west of each ocean? With which ocean do they both connect on the north? On the south?

There is also another part of the ocean that lies between Asia and the Antarctic Ocean. Name this part of the ocean. What land is west of it?

The great ocean, called Pacific (peaceful), covers more than one-third of the surface of the whole earth, and is about as large as all the other oceans together. What lands border it? What oceans join it?

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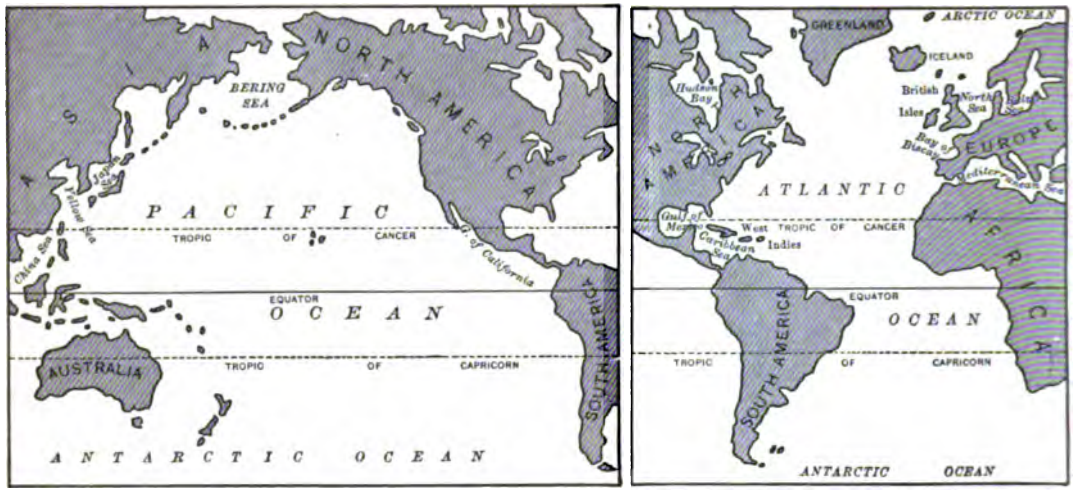

Bound it, pointing out on the map the continents and connected oceans. Then bound it from memory.

Notice how the Atlantic Ocean narrows between South America and Africa, and widens north and south of this part. Bound the Atlantic Ocean as you did the Pacific.

Bound the Indian Ocean.

Of what use to man are the oceans?

Ships cross the oceans and carry people and products from one country to another much more conveniently and cheaply than they can be carried by land. When ships reach the shore, they need to have places where they can remain at anchor without being exposed to storms. Such places are called harbors, and at the good harbors cities usually grow

A HARBOR.

up. Of what use to a city is a harbor? Do you know any city that has a good harbor? Notice the long docks in this picture of a harbor.

A ship, when it is out in the open sea, is quite safe, even in a storm; but when it is near a coast, the sailors must be very sure just where they are, or the wind may drive the ship on shore.

To help sailors locate their ships, light-

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houses are placed at dangerous points along the coast. On the top of each lighthouse is a lantern; and from sunset to sunrise the lamp in the lantern is kept burning. There are red lights and white lights. Some seem to burn steadily. Others seem to flash brightly and then disappear, to flash again and disappear regularly, and the sailors can count the number of times that the light flashes in a minute, and so find out which lighthouse it is. The lighthouses help them show him the deep channel. Yet, in spite of all these precautions, vessels are often driven ashore and wrecked. To help shipwrecked sailors, life-saving stations and crews are placed along dangerous coasts. The surfman walks along the shore. When he sees a vessel sailing toward a dangerous place, he warns it off by signals. If he finds a ship wrecked or in distress, he hurries to the station and tells his companions. They hasten to the wreck with their life-boat and

LIGHTHOUSE. BELL-BUOY. LIFE-SAVING STATION.

also by day, for each one is painted peculiarly, perhaps red, or white, or striped horizontally, or like a barber's pole. Some lighthouses also have clocklike machinery to ring a fog-bell, or make a great fog-whistle blow.

At a dangerous reef[1] or shoal[2] off the land, a light-ship is sometimes stationed; sometimes a bell-buoy or a whistling-buoy is anchored. When the sailor brings his ship into the harbor, there are red buoys, at his right hand, and black buoys, at his left, to other life-saving apparatus, get all the shipwrecked people ashore, if possible, and then take them to the station, where they are cared for until they can proceed on their journey. In this way many lives are saved every year on the coasts of the United States and other countries.

Describe the three pictures on this page.

What are continents? Name the six continents. What three continents are united? What two?

Name the oceans. Bound each. Which is the largest ocean? The smallest? Which ocean has most islands in it? Which has fewest?

[1] *Reef:* a chain of rocks at or near the surface of the water.

[2] *Shoal:* shallow place.

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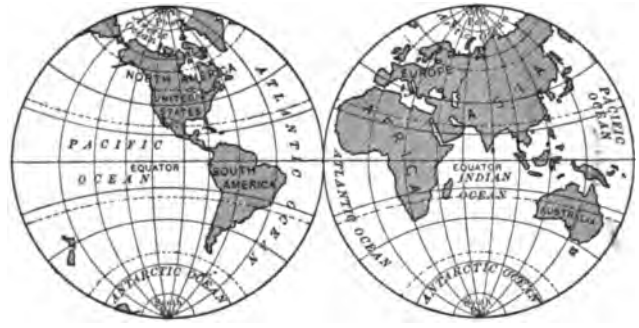
Name the arms of the Atlantic on the west; on the east. Name two seas and a bay bordering the Indian Ocean.

What are harbors? What are light-houses? What are bell-buoys?

The greatest depth of the ocean has been found to be about five miles. The height of the highest mountains is a little more than five miles. Around the border of each continent the ocean is, as a rule, not more than from a few hundred feet to a mile deep. Farther out there is a steep descent into the deep ocean valley.



HEMISPHERES WITH PARALLELS AND MERIDIANS.

20. Lines on Globes and Maps.

For convenience in finding places on the globe, certain lines are drawn upon it, some from east to west, and some from north to south. The lines drawn around the globe from east to west are called *parallels*, and those from north to south are called *meridians*. The line extending east and west around the globe just midway between the poles is called the *equator*.

Places between the equator and the north pole are said to be in north latitude. Places between the equator and the south pole are in south latitude.

Similar lines are drawn upon maps for the same purpose. These lines, you must remember, are only on the globes and the maps, and not upon the earth, but we sometimes speak of them as though they were on the earth itself.

Upon the map point out the north pole; the south pole; the equator; the parallels; the meridians.

Point out as nearly as you can where you live.

Turn to the map on page 60, and trace the meridians and the parallels. Point out some place on the map; another place directly east of it; directly west of it; north of it; south of it.

Select a place, and name another northeast of it; one southeast of it; one southwest of it; one northwest of it. Is there more land north of the equator or south of it?

21. Drawing the Continents.

Here are maps of the continents, which you are to copy carefully and to continue copying until you can

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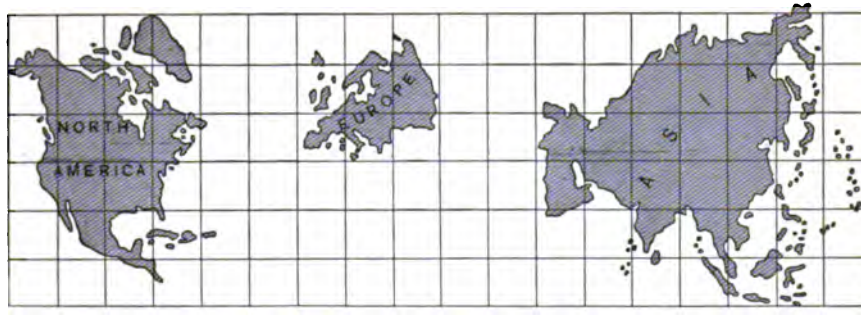
make them quickly. Copy them until you can easily draw them without looking at the book.



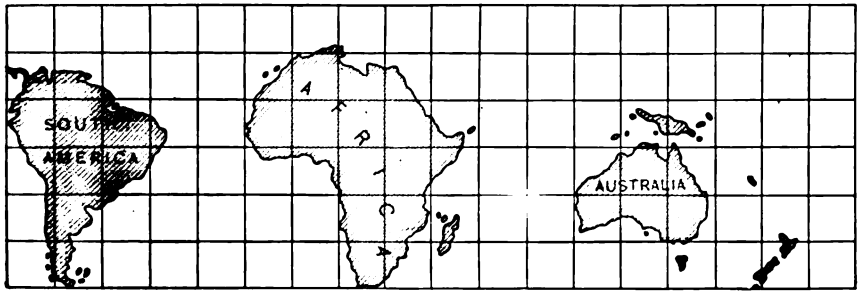
Before you copy the maps draw lines on your paper a quarter of an inch apart as they are in this map. Each side of each little square represents a thousand miles. Knowing this you can tell how large each continent is, and how much larger the large continents are than the small ones.

MERCATOR MAP.

How many miles apart are the northernmost and southernmost points of Asia? The most eastern and the most western? Answer similar questions about the other continents.

The map below shows the earth for a certain distance north and south of the equator, but not all the way to the poles. It is made as though it were a part of the covering of a globe pulled off and stretched at the edges so as to lie flat.

Such a map is called a Mercator map, and shows better than any other kind of map the *direction* of places from one another over the whole earth. It does not show the true *shape* of the continents as well as other maps do.



Look at the map on the next page and tell in what direction

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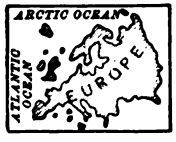
each continent is from each of the other continents, each ocean from each of the other oceans, each continent from each ocean.

Below is a small map of North America.

Copy it carefully, and then sketch South America beside it in its proper place. Copy it again, and sketch Europe in its proper place. Copy it once more, and then sketch Asia in its proper place. Again copy it, and sketch in their proper places South America, Europe, and Africa. Practice doing this frequently when you have a few minutes of spare time. After each sketching look at the map, and see where your sketch can be improved.

Below is a map of Europe.

Copy it carefully, and sketch beside it Asia. Copy it again and sketch Africa. Again copy it, and sketch North America.



You need not wait to do all that this lesson directs before you learn other lessons. Almost every day for several months turn back to this lesson, and make some of the drawings which are here suggested

REVIEW QUESTIONS.

What is the shape of the earth?

What is a hemisphere?

What are continents? Oceans?

What three continents are united? What two? What continent is not united to any other?

What motions has the earth?

What is the earth's axis? What are the poles? In which direction does the earth turn? Illustrate this by a globe or a ball. What are parallels? Meridians? What is the equator? Which way is north upon most maps?

22. Air.

The air is all about us. Were there no air to breathe, we could not live. The air is sometimes still and sometimes in motion. Wind is air in motion. Were you ever out in a strong wind, and did you feel the air press against you? Have you seen trees blown down by the wind? Did you ever sail in a boat blown along by the wind? If you have noticed these and other such facts, you must know that air is a very real and important part of this world. The air surrounds the solid earth on all sides and reaches many miles (fifty or more) above it.

23. Waves, Tides, and Currents.

The water of the ocean is never still. Sometimes the wind blows it

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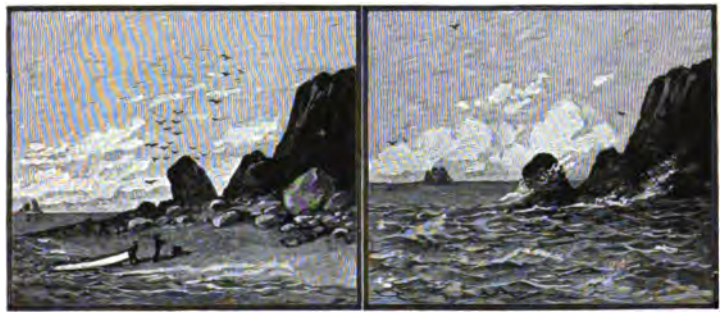
into great waves that come dashing upon the shores. But even where there is no wind the waters of the ocean rise and fall regularly twice in a little more than one day. This rising and falling of the water is called the tide. In the middle of the ocean this tide makes a change of only two or three feet in the depth of the water, but at the shores and in bays and rivers connected with the ocean the change from high tide to low tide makes in some places many feet of difference in the depth of the water.



LOW TIDE. HIGH TIDE.

Besides the waves and the tides there are currents in the ocean that are like vast rivers running in the midst of the waters. One of these great currents flows from the Gulf of Mexico along the east coast of North America a few miles from the shore, and at length crosses the Atlantic Ocean to the western shores of Europe. This current is called the "Gulf Stream."

This current of water is many miles in width and is warmer than the water on either side of it. It makes the winds that blow over it from the west warm and moist, and so the climate of Western Europe is more warm and moist than it would otherwise be.

A similar current sweeps past the islands on the east of Asia and northeastward across the Pacific to the shores of America. This makes the western shores of America warmer and more even in temperature[1] than the eastern.

24. Forms of Water.

You know that wet clothes hung in the air become dry, that the ponds by the roadside dry up, that the water in pitchers and pails dries away. Damp things dry faster in warm weather than in cold. You know these facts; but you may not know that the water from the clothes, the pond, and the pails goes into the air in a form which we cannot see; yet so it is.

[1] *Even in temperature:* having only slight changes from hot to cold or cold to hot.

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If you look at the spout of a tea-kettle of boiling water, you will notice that nothing can be seen close to the spout, but that steam appears in the air a little way from the spout. The watery vapor that comes from the spout of the kettle is partially cooled in the air and so made visible.[1] There is always some watery vapor in the air. It rises from the surface of every exposed bit of water and from everything that is becoming dry. When water dries up or takes the form of vapor, we say it *evaporates*. When by cooling it changes again into a visible form, or when it changes from mist or cloud into drops of water, it is said to *condense*.

If a cold plate or knife is placed in the steam escaping from the tea-kettle, its surface becomes covered with drops of water. This water is the steam condensed.

If a pitcher of ice water is allowed to stand in a warm room, it soon becomes moist upon the outside, and drops of water will finally trickle down its sides. This water does not come through the pitcher, but is condensed from the vapor in the surrounding air.

[1] *Visible:* that is visible which can be seen.

The amount of vapor the air can contain depends chiefly upon its warmth. The higher the temperature,[2] the greater the amount of vapor the air will hold in the invisible form.

When air that is full of moisture is cooled, it leaves some of its moisture in the form of *dew* upon any surface cooler than the air. On a summer night the air near the ground sometimes contains nearly all the water it can hold. If the night is clear and cool, dew will be formed. Clouds keep the heat from leaving the earth, and this prevents its being cooled enough to condense the invisible watery vapor into dew. When it is cold enough to freeze the dew, frozen dew or *frost* is produced.

When the vapor of moist air is condensed at a considerable height from the ground, it forms clouds. When the condensation takes place near the ground, *mist* or *fog* is formed.

Clouds are sometimes seen resting against a mountain side, as in the picture shown on the next page. Were we at the place where the cloud touches the mountain, we would say we were in a fog; but if we should climb above the fog, we could look down upon

[2] The higher the temperature, the warmer it is.

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the clouds. Would not this be a strange sight?

Raindrops are formed when a current of colder air meets a warmer current, just as drops were formed on the cold dish when it met the warm vapor. The moisture first condenses into clouds, and then, if the condensation is continued, into rain.

CLOUDS ON A MOUNTAIN SIDE.

When it rains, the water falls upon the land or upon the water. Some of the water falling upon the land is dried up by the sun; that is, it goes back into the air again. Some of the water sinks into the land and reappears in springs. The rain that does not sink into the land runs down the slopes into the streams and joins the water from the springs. It flows in brooks and rivers and some of it finally reaches the ocean.

Were it not for the rain all the water on the land would quickly run to the ocean. In that case we should have no water to drink, no moisture for the plants, no rivers for ships — all the water would be in the ocean, all the land would be dry; no plants could grow, no animals could live, no people could live, and this would be a dead world.

But the great sun, which is as necessary to us as the earth itself, lifts the little particles of water into the air, the particles cool and unite into clouds, the wind blows the clouds over the land.

When cold air strikes the warm clouds, the particles of water of which the clouds are made, fall in rain, and the water begins to run back to the ocean again. On its way the thirsty soil absorbs it, thirsty plants and animals are refreshed by it, and man uses it in many ways.

The rain prepares this earth to become the home of life.

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25. Effects of Heat on Air.

If a fire is lighted on the hearth, the smoke will go up the chimney. If you drop light pieces of paper near the

A BONFIRE.

fire, they will be drawn into it and carried upward, just as the arrows in this picture show you the wind is drawn toward the bonfire and upward with the heated smoke. When a stove draws, hot air is rising through the pipe, and colder air is coming in to feed the fire.

Fill a paper bag with air, tie it tightly, and then take it into a cold place. The air inside will contract or occupy less space than before. Hold the bag to the fire, and the air inside will expand, and perhaps will stretch the bag until it bursts.

Heat causes air and most other substances to swell or expand. Hence heated air is lighter than cold air. When cold air and warm air come together, which rises to the top? When cold water and warm water are poured into a pail, which sinks to the bottom? Why?

Air is lighter than water. That is why bubbles rise through water, and why the air is above the water instead of the water being above the air. If we pour water into a pail, it will go to the bottom and push up the air that is there, and as the water fills the pail, it will lift the air out.

The heavier fluid gets under the lighter one and bears it up. You know oil will float upon water, and air upon oil; so light air floats upon, or is held up by, heavy air.

The heaviest air is nearest the earth; the lighter air rises above the heavier.

EFFECT OF AIR CURRENTS.

Near the earth, hot air, which is light, is pushed up by the cold air, which is heavy. Higher up, the warm air cools.

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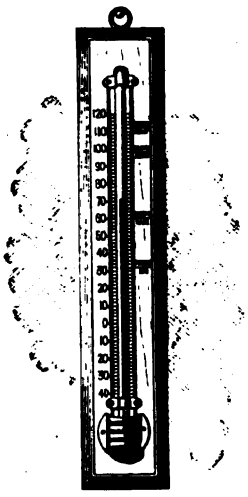
In the last picture you see the effect of opening the door of a warm room on a cold day. Which way does the cold air move? The warm air?

26. Temperature.

Can you tell by the thermometer how warm it is?

A thermometer is a tube of glass with a ball, or bulb, at the bottom filled with mercury. Since increase of heat causes objects to expand, the mercury will expand, and therefore rise in the tube, whenever the thermometer is made warmer. So by seeing how high the mercury stands, we can tell how warm it is.



A THERMOMETER.

Between the freezing and the boiling points there are 180 degrees, marked on the metal plate beside the tube. If the thermometer is put into water that is just freezing, the mercury will go down to the point marked 32 degrees. If it is placed in boiling water, the mercury will rise to 212 degrees. If the thermometer is placed on the wall in a schoolroom just about warm enough for comfort and health, it will stand at 70 degrees.

What effect will holding the thermometer in your hand have, if it mark 70 degrees to begin with? Will putting snow on the thermometer cause the mercury to rise or to fall?

When we say the average temperature of a place is 50 degrees, we mean that a thermometer out of doors in the shade shows an average of 50 degrees.

Is 50 degrees colder or warmer than where you live?

27. Effects of the Sun's Heat.

You know that some things are more easily heated than others.

As you go out into the sunshine on a warm day notice which things feel warmest; the wood, the grass, the soil, the rock, or the metal. In the evening, when these things have cooled, which feels coldest?

The sun's rays go through some substances without heating them. Air is a substance but little heated by the sun's direct rays; but when these rays have heated the earth, then the earth gives off heat rays that warm the air. The air is heated by the earth more than by the direct rays of the sun.

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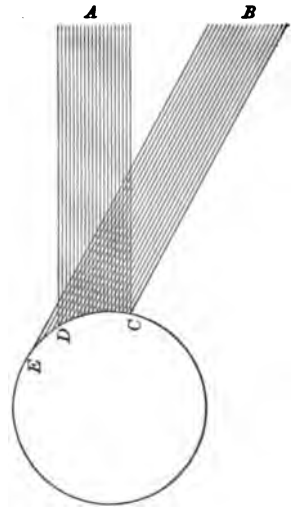
During the daytime in summer the sun heats the land more than it heats the water, so that in the afternoon the land on the seashore is warmer than the water. The land heats the air above it more than the water heats the air above it, so that the air over the water is cooler and heavier than the air over the land. Unless prevented by a stronger wind, the sea air will flow in upon the land, under the air that rested upon the land, and there will be a sea breeze.

During the night the land cools faster than the water, and towards morning the land becomes cooler than the water. The air over the land is now cooler and heavier than that over the water, and so it flows out over the water and takes the place of the lighter air. This makes a land breeze.

All winds are caused by the air being heavier in one place than in another. The difference in the weight of the air is mainly due to a difference in the warmth of the air.

The sun is the great source of heat for our earth.

The circle in this figure represents the earth, and the lines *A* represent rays of light and heat from the sun, when the sun is directly overhead to the inhabitants living between *C* and *D*. The lines *B* represent the rays from the sun, when the sun is nearer the horizon.[1]



SUN'S RAYS, DIRECT AND OBLIQUE.

Notice that the rays *B* spread over more of the earth's surface than the rays *A*: hence fewer fall between *C* and *D*. Therefore less heat reaches the earth between *C* and *D* from *B* when the sun is near the horizon, than from *A* when the sun is overhead.

We should remember that the earth is always cooling, or sending heat off into space, and that were it not for the heat which it constantly receives from the sun, the earth would soon become too cold to live upon. We know how much the earth cools in a few hours of darkness, so that before sunrise in the morning it is usually much cooler than it was the evening before.

In the winter season we feel the

[1] The horizon is the place where the earth and sky seem to meet.

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loss of the heat which the earth has sent out into the great cold space in which it moves; and did not the sun rise higher above the horizon in spring and summer than it does in winter, we should have a never-ending winter, which would grow colder and colder, until nothing could live.

But while we are having our winter, the sun is shining hot upon the people who live south of the equator, and they are having their summer. When it becomes summer with us again, it is winter with them.

28. Zones.

The sun gives most heat to those parts of the earth near the equator, and least to those near the poles. Hence the earth near the equator is hot, and near the poles, cold.

The belt of land and water near the equator is always hot. The belts around the poles are very cold for a great part of the year. Between the hot belt and each of the cold belts there is a belt of land and water not so hot as the one nor so cold as the other. Zone means belt, and torrid means hot, so we call the hot belt, which lies on each side of the equator, the torrid zone. Frigid means cold. There are two frigid zones, one surrounding each pole. The belts between the torrid zone and the frigid zones are called the temperate zones, because they are neither very hot nor very cold. Of course, those parts of the temperate zones near the torrid zone are quite warm, much like the torrid zone, and those parts of the temperate zone near the frigid zones are quite cold. So we have a warm temperate zone and a cool temperate zone north of the equator, and a warm temperate and a cool temperate zone south of the equator. How many zones are there? What are the divisions of the temperate zones?

As we go from the equator north or south, what change in temperature will we usually find? We see that a difference in the latitude of places makes a difference in the temperature of the places.

If we climb a high mountain, we find that the air grows colder toward the top. Often high mountains are covered with snow at the top, even though they are in the torrid zone. You have learned that the higher a region is, the colder it is.

You will learn more about zones and where they are by looking at the maps on the next page.

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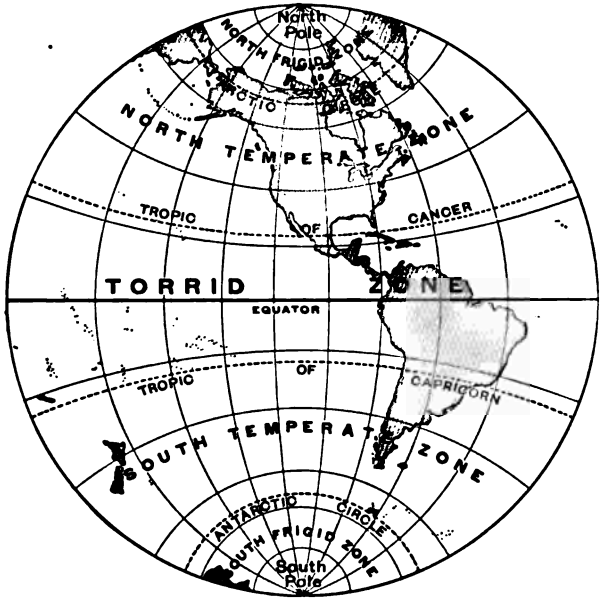

REVIEW QUESTIONS.

What is wind? What is watery vapor? When is vapor said to be invisible? What are some of the names given to visible watery vapor?

What does *evaporate* mean? What does *condense* mean?

Does hot air hold more or less watery vapor than cold air? If air cools, does it give off or take up moisture? Does dew form on clear nights or on cloudy nights? What is the difference between fog and cloud? Dew and frost? Explain the cause of land breezes and sea breezes. Which is the morning breeze, the land breeze or the sea breeze? Why?

At what times in the day is the sun near the horizon? Do you think the space between us and the moon is warm or cold? Which heats faster, land or water? Which cools faster, land or water? In the summer season is the land or the water the warmer? In the winter season is the land or the water the colder? Which varies most in temperature through the year, land or water? Are the changes from heat to cold greater in the interior of a continent or on its coasts? Where is the hot belt of the earth? Where are the coldest regions? What is the temperature of the regions between those hottest and those coldest?

Are the hottest summers and the coldest winters on the shores of the continents or in the interior? Why?

What are the cold zones called? The hot zone? Draw a map showing the zones. Write in each zone its name. In which zone would you prefer to live?

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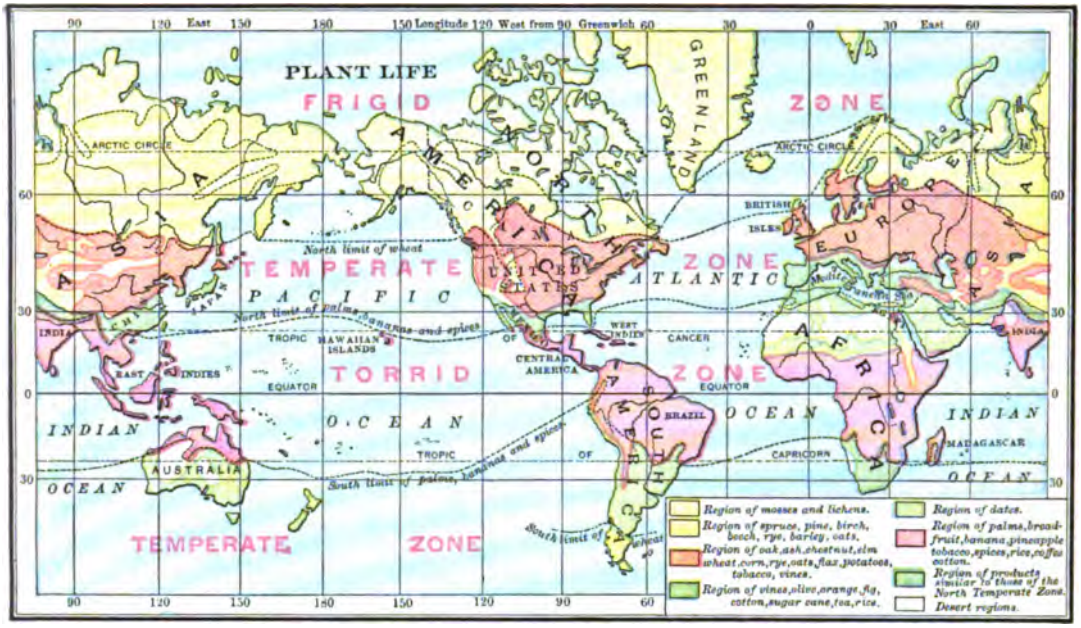

This map of plant life shows you more clearly than a map of the zones could where plants of different kinds grow.

Notice that certain kinds of plants are found together, that some plants grow only in a few places, and that others are widely scattered, growing in regions which are far separated and differ much in temperature.

Consult this map whenever you read about plants.

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29. Plants of the Torrid Zone.

Look at the maps on page 40, and see what part of each continent is within the torrid zone. Which continent has no land within the torrid zone?

Not only is this the hot zone of the world, but it is also the zone where the most rain falls.

In this zone of continual summer many kinds of plants find a home well suited to their growth, and here there are the richest and densest forests of the world.

The trees of this zone are chiefly palm trees, which do not lose their leaves regularly every year, as most of our trees do.

The plants which give food to the people of this hot region are different from most of those raised near your

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homes. In this region the people live mostly upon bananas, breadfruit, and cocoanuts.

The banana is the main food of a large part of the people who live in tropical South America and on the islands of the Pacific, where every garden has its banana trees. An acre of banana trees produces more than a hundred times as much food as an acre of wheat.

BANANA TREE.

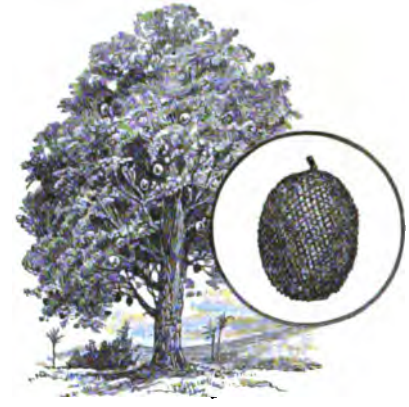
A banana tree has beautiful broad leaves which look somewhat like those of a calla-lily. It grows from ten to fifteen and even twenty feet high. When two years old, the tree bears fruit and then dies, but a number of young shoots spring up around the old stem.

Even the trunk is of use, for it contains a fiber almost as soft as silk, which can be woven into fine muslin.

Our bananas come from Central America, the West Indies, and Florida, the southeastern peninsula of the United States. See map, page 41.

The breadfruit tree is found chiefly on the islands of the Pacific. It grows to a height of forty or fifty feet.

It produces three crops a year. The fruit often weighs four pounds. It is like a strawberry in shape, but has a rind like a pineapple. When baked in a pit or oven, it resembles wheat bread.



BREADFRUIT.

The cocoanut-palm grows about eighty feet high, and is crowned with a tuft of leaves, each of which is four to seven yards long. The fruit hangs in clusters at the base of the leaves.

COCOANUT-PALM.

Every part of this tree is of great use. The kernel of the nut gives food and oil, the milk is a refreshing drink, the shells are made into drinking-cups, the fibers of the husks enclosing the fruit are twisted into rope. The leaves are used for thatching houses, and are woven into mats and baskets, while the trunk of the tree furnishes timber.

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The spices, as pepper, cloves, nutmeg, cinnamon, are all natives of tropical countries. They are obtained chiefly from the islands southeast of Asia.

BLACK PEPPER.

NUTMEG.

COFFEE.

Pepper is the dried fruit of a climbing shrub. The fruit of the red pepper is dried, ground, mixed with flour, and baked into cakes. The cakes are then ground into very fine powder.

Cloves are the dried buds of flowers. The clove tree grows very high. The word *clove* comes from another word meaning a nail. Can you see that a clove looks like a nail?

CLOVES.

Cinnamon is the dried bark of cinnamon trees.

A nutmeg tree looks very much like an orange tree. Upon a nutmeg tree flowers and fruit are found growing at the same time. Is this true of our fruit-bearing trees? Nutmeg is the seed of the fruit.

Coffee is the fruit of a tropical plant that is raised mostly in Brazil and the East Indies. See map, page 41.

After the plant reaches a height of six feet or a little more, its top is cut off. The tree bears small white flowers for eight months. The fruit is gathered three times a year. The seeds, or coffee beans, are gathered and then prepared for market by being put on mats to dry in the sun.

TEA.

Tea is the dried leaves of a plant that grows in both tropical and temperate regions. It is cultivated in China, Japan, southern

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Asia, and some other countries. See map, page 41.

Each leaf is carefully picked, roasted on pans over a fire, and rolled by hand. To do this requires a great deal of work, and tea-raising pays only where labor is cheap.

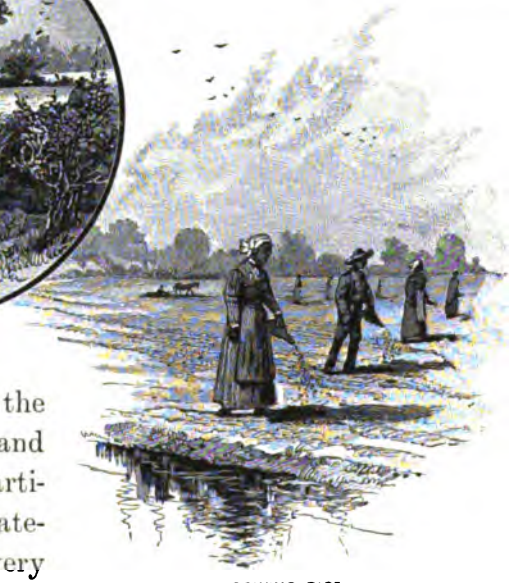
The picture on page 43 shows you a Japanese gathering tea leaves; in his home, Japan, labor is cheap.

RICE FIELD.

In the hot and the warm belts, dates and rice are important articles of food. The date-palm grows in very dry soils; rice grows in very moist soils. The date is often called the "Bread of the Desert," for it is the chief food in the desert regions of northern Africa and southwestern Asia. A date-palm will bear fruit for more than two hundred years. Dates are eaten both fresh and dried. Wine and vinegar is made from the fruit. The leaves are woven into mats and bags, the leaf-stalks into baskets, and the wood is used in making houses. In northern Africa the seeds of the dates are roasted and used as coffee

Rice is the main food of a large part of the people of eastern and southeastern Asia and of parts of South Africa. It is also cultivated in the southeastern part of the United States.

Rice grows best upon low lands that are sometimes under water and where the climate is warm and showers are frequent. Land upon which rice grows will raise but little else, and so in regions where it grows it becomes the main article of food.



SOWING RICE.

COTTON PLANT.

Next to the food plants, cotton is the plant of greatest use to man. It is a tropical plant raised in Brazil, India, Egypt, and the United States. Find these countries on the map.

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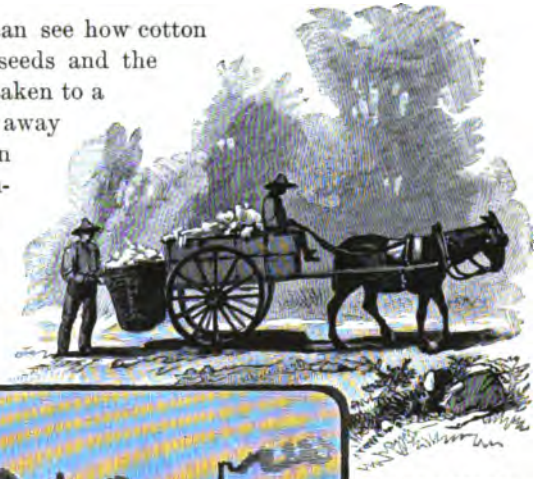
It is grown more abundantly in our Southern States than anywhere else. Here the plant is an annual,[1] but the tree cotton of South America and Africa is obtained from a plant which lives many years.

In the picture of the cotton fields, you can see how cotton is raised. The pods, or bolls, containing the seeds and the fiber around them, are picked by hand and taken to a gin, which by means of saw-like teeth draws away the fiber from the seeds. The fiber or cotton lint is packed in bales and sent off to be manufactured into cotton cloth. The finest cotton is called sea-island cotton; sewing-thread is made from its fiber. The fibers of the stalk of the cotton plant are woven into bagging or made into pulp for fine writing paper, and the seeds of the plant contain a useful oil.



LOADING COTTON.

PICKING COTTON.

COTTON PICKERS' CABINS.

Another kind of cotton is called upland cotton. This, as the name tells you, is grown on the land back of the lowlands near the Atlantic and Gulf coasts. These two kinds of cotton, "sea-island" and "upland," are natives of North America, and are the kinds preferred by manufacturers.

Cotton can be cultivated with success in many parts of the world. It was first raised in India more than two thousand years ago. The Indians of America used cotton before the time of Columbus, and made of it garments and covering for their huts.

The first successful cotton factory in the United States was established in 1790. Though cotton is grown in the southern part only of the United States, it is manufactured mostly in the northeastern part.

[1] *Annual:* a plant living but a season.

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30. Animals of the Torrid Zone.

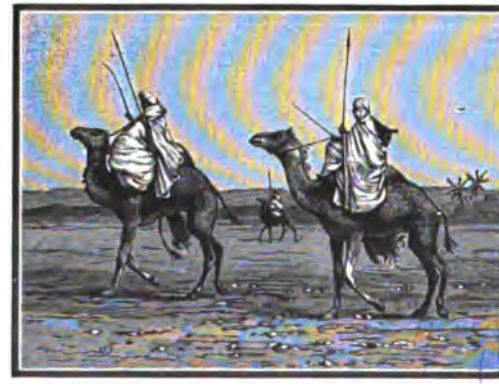
In the torrid zone live the largest and fiercest animals. There are the lion and the panther, the great elephant of the plains of Asia and Africa, and the camel of the plains and deserts. You will learn more about these animals when you study the countries where they live.

LION.

ELEPHANT.

PANTHER.

In this zone are birds of the most beautiful plumage and insects of brilliant hues, as well as the most dangerous snakes and other reptiles.



CAMELS.

31. Plants of the Temperate Zones.

In these zones there are few palms, but instead grow the forest trees with which you are familiar, the oak, the chestnut, the walnut, the maple. In the cooler part of the north temperate zone most of the trees are pine, spruce, and hemlock.

The chief food plants are sugar-cane, corn, wheat, oats, and potatoes.

Sugar-cane grows only in the warmer part of this belt near the torrid zone. Wheat grows best in the central part of the north temperate zone. Corn thrives best in a climate warmer, and oats in a climate cooler, than that suited to wheat.

Sugar is made from sugar-cane, beets, and the sap of the maple tree.

The sap is pressed out of the sugar-cane stalks by crushing them between heavy rollers, and then it is boiled till sugar is formed. Molasses is another product of sugar-cane.

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Sugar-cane grows in India and the East Indies, the West Indies, South America, the Hawaiian Islands, and the southern part of the United States. Find the Hawaiian Islands on the map, page 41.

SUGAR-CANE HARVEST. WHEAT FIELD. CORN FIELD.

Corn requires a warm climate, with much sunshine and many showers.

In the United States it is raised chiefly in the central part. It is also raised in South America, in south-eastern Europe, and on the shores of the Indian Ocean.

This plant is a native of America, and was the only grain cultivated by the Indians when the New World was discovered; hence it is often called *Indian corn*.

Wheat is the principal grain eaten by the people of the United States and of Europe. Large quantities of wheat raised in the United States are sent to Europe every year.

Oats grow well in a soil less fertile than is required for wheat or corn. In our country they are raised mainly in the northern part. Here they are

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used chiefly as food for horses. The people of northern Europe use large quantities of oatmeal for food.

The potato is an important article of food. There are two different plants known as potatoes.

The sweet potato grows in our southern states, and in some localities farther north. It requires a warmer climate than that adapted to the Irish potato.

The Irish potato is raised largely in the northern states and Canada. Though a native of America, it is more extensively cultivated in northern Europe and in the British Isles, than in the United States. See map, p. 41.

Twelve times as many bushels of potatoes are raised in Europe every year as are raised in the United States.

Tobacco is one of the plants that was cultivated by the Indians in this country before its discovery by Columbus. White people learned the use of tobacco from the Indians. It grows best in the warm temperate zones, though it can be grown in the cool temperate. Its qualities depend very much upon the soil and the climate.

TOBACCO FIELD.

As much tobacco is raised in the United States as in the rest of the world.

There are several kinds of tobacco. In this country it is a broad-leaved plant with a thick, juicy stem, growing from three to six feet or more in height.

Flax is a plant of great value. From its fibers linen is woven, while the seed furnishes linseed oil, an oil used in mixing paints.

FLAX.

Hemp is a plant somewhat like flax; but its fibers are coarser and stronger.

Both hemp and flax are grown chiefly in Europe, but they are also cultivated in the United States.

The principal fruit trees of the cool temperate zone are the apple, peach,

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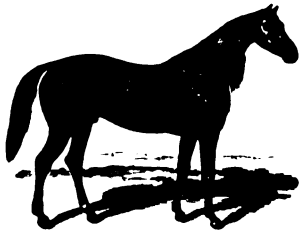
pear, plum, and cherry. Do you know any trees that bear nuts?

The fruits of the warmer localities are the orange, lemon, pineapple, and olive.

ORANGES.

32. Animals of the Temperate Zones.

In the temperate zones there are few wild animals, for in these zones which are mostly thickly settled by man, most of the more harmful wild animals have been killed.



Here the domestic animals are reared. Domestic animals are tame animals which are cared for by man,

D

because they are of use to him. Name some of them, and tell in what ways they are useful.

33. Plants and Animals of the Frigid Zones.

The frigid zones are nearly destitute of food plants. Only mosses and stunted shrubs, and trees like the willow grow there.

SEAL.

There is animal life in these frozen regions, for the seals are protected from the cold by soft fur, the ducks

WHALE.

by downy feathers, and the whales by great stores of fat.

REVIEW QUESTIONS.

In what part of the world are the densest forests? What are some of the important trees of the tropical regions? What parts of what continents are between the tropics? What are the important trees of the north temperate zone?

What are the grain foods of the torrid zone? Of the warm temperate? Of the cool temperate?

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What are the fruits of the torrid zone? Of the warm temperate? Of the cool temperate?

Describe the cocoa-palm. The banana. The date.

Where are spices found? Whence do we get our coffee? Tea?

Where is rice grown? Tell what you can about cotton.

What are wild animals? What are domestic animals? Are wild animals numerous where men are numerous? Are the temperate, the torrid, or the frigid zones most densely populated? Why? In which of these zones are found the most wild animals? Do you think that small islands have many large wild beasts?

HOMES.

What are some of the animals of the torrid zone? The temperate zones? The frigid zone? Do we go to the north or to the south for furs? What reasons can you give for this? In what zone are the most beautiful birds? The most poisonous reptiles?

34. Civilization.

In studying about the people who live in different parts of the world you will find that they differ very much in the way they live.

Savage People.— Some of the natives of Africa live in caves and holes in the ground, or in little huts made without tools, and their only food is wild plants and animals. Such people are called savages. Many of the people who live on the islands in the Pacific Ocean are savages.

Barbarous People.— Other tribes in Africa live in more comfortable huts, cultivate the soil, and have flocks and herds. They have advanced beyond the savage state, but we call them barbarous people because they have not

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yet learned how to do many things skillfully, or how to live comfortably.

There are many barbarous tribes in Asia and Africa, and also among the American Indians.

The great difference between savage and barbarous people is that barbarous people have learned to cultivate the soil and keep domestic animals. Do you suppose this makes life more comfortable for them? In what zone do most savage people probably live? Why?

HOUSE IN NORTHERN EUROPE.

Civilized People. — Most of the people of the world have laws and rulers to govern them; they have schools and churches, factories and shops, railroads and telegraph lines. They manufacture many kinds of goods, some of which they exchange for the products of foreign countries. They have books, newspapers, and pictures, and live in comfortable homes. All such people are civilized.

Which of the homes shown on these two pages are those of savage people? Which, of barbarous people? Which, of civilized people? Which are country homes? Which is a home in a village? Which is a home in a city?

35. Occupations.

The wants of the savage or of the barbarian are very few. He makes for himself a few weapons with which to hunt, and a few utensils in which to cook or store his food. If he has a flock or herd, he wanders from one place to another in search of pasturage for his animals.

He learns to make tents that can be put up or taken down quickly.

What are some of the wants of civilized people?

To satisfy all these wants, the civilized world has become a great workshop of busy people.

The farmers cultivate the crops and care for the animals that furnish food, clothing, and service. The miners obtain the ores and metals found in the earth. The manufacturers turn the materials obtained from the mines, from trees, plants, or animals into useful articles, which

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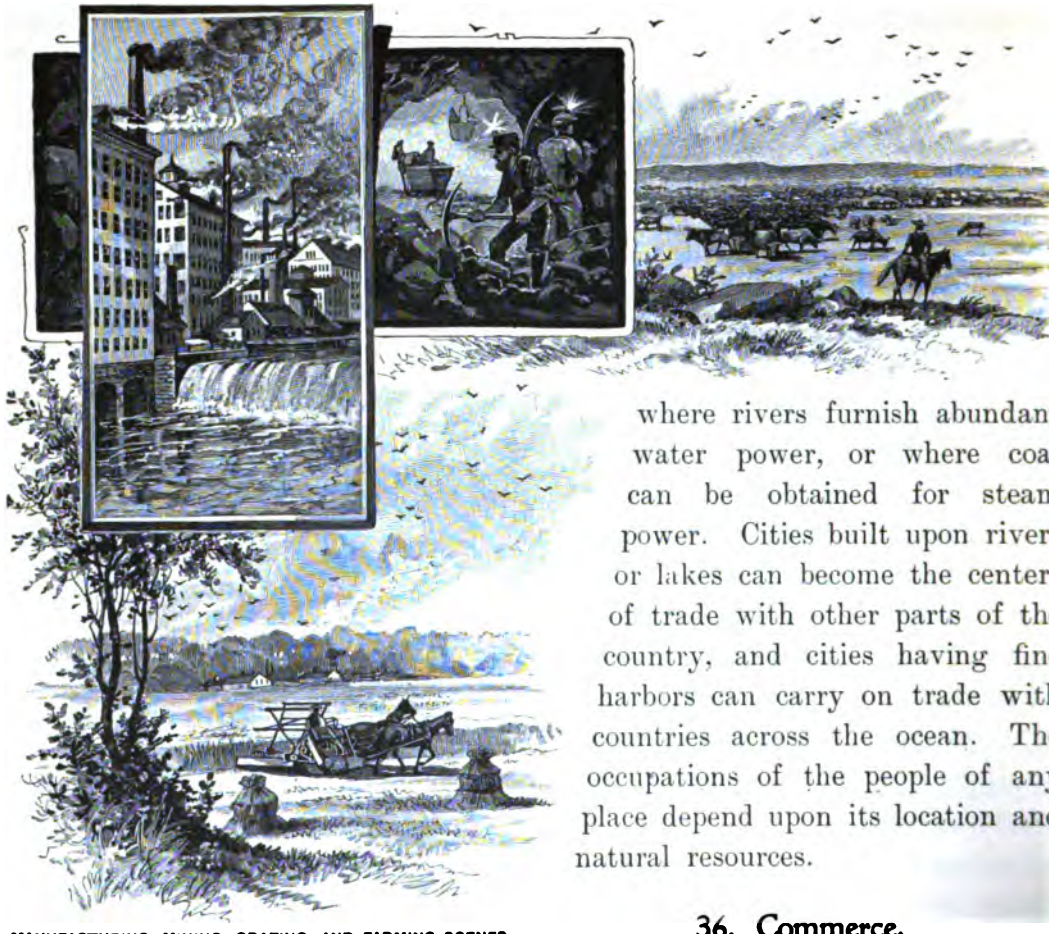

MANUFACTURING, MINING, GRAZING, AND FARMING SCENES.

the traders distribute to those who use them.

What are the principal occupations carried on in the place where you live?

Where the land is very fertile agriculture is the chief industry. Where the earth is rich in valuable ores or metals mining is extensively carried on. Manufactures can flourish only where rivers furnish abundant water power, or where coal can be obtained for steam power. Cities built upon rivers or lakes can become the centers of trade with other parts of the country, and cities having fine harbors can carry on trade with countries across the ocean. The occupations of the people of any place depend upon its location and natural resources.

36. Commerce.

No one class of people can raise or manufacture all the necessities of life. People must either exchange goods with one another, or sell some of their own products to purchase the products of others. To aid in this exchange, many people make it their occupation to buy and sell goods. Such people are engaged in trade or

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commerce. Goods are constantly being sent from different parts of our country to other parts, which need them but do not produce them. Many things are also sent out of our country to other countries, and many things are brought from other countries to our own.

LOGGING SCENE.

Commerce which is carried on entirely within a country is called *domestic commerce*. Commerce carried on between places in different countries is called *foreign commerce*.

Goods which are sent out of a country are called its *exports*. Those which are brought into it are called its *imports*.

SHIPPING.

What is commerce? Why is it necessary for some people to engage in commerce? What is domestic commerce? What is foreign commerce? What are exports? What are imports?

Where do the people engage in farming? Is farming carried on

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more in the temperate or in the frigid zone? Why? Are there more farmers in the temperate or in the torrid zone? Why? Is farming carried on largely in mountainous regions? What are naturally the occupations of people in mountainous regions?

Where are manufactures likely to be most abundant? How is power obtained to move machinery? Can a country with no coal mines be a great manufacturing country?

Where must cities be located to have great commerce?

Are there any kinds of business not mentioned in this lesson? What are they?

37. Races of Men.

The people of different parts of the world vary greatly, not only in the way they live, but also in appearance, in size, in form, in the color of the skin, and in the shape of the head. People much alike in these respects, but unlike all other people, are grouped together and called a *race*.

WHITE MAN.

There are five races of men. The white race, the yellow race, the black race, the red race, and the brown race. Each race receives its name from the color of the people belonging to it.

The white race is the one to which most of the people of our country belong, and is the race most advanced in civilization. The people of this race are of various complexions, but all, whether light or dark, are quite different in color from the other races.

YELLOW MAN.

The people of the white race are the most intelligent in the world. They live more comfortably than the people of other races, and support churches and schools. Most of the people of North and South America, of Europe, and of southern and western Asia belong to this race. They are increasing in numbers, and through their influence some of the other races are becoming more civilized.

The Chinese and the Japanese are the best specimens of the yellow race. Most of the people of this race live in northern and eastern Asia. Their dress and manner of living are very different from ours, and they are in many respects very interesting. These people are increasing in numbers, and many of them are imitating the customs and dress of the white race.

The negroes belong to the black race.

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Those in this country are civilized, many of them are educated, and they live and dress like the white race. They are descendants of people who were brought from Africa to be slaves to the early inhabitants of this country. Most of the negroes in the southern part of the United States were slaves until the Civil War, when they were set free.

BLACK MAN.

The black race occupies the central and southern part of Africa, some parts of Australia, and some of the Pacific Islands.

The American Indians are the red race. When people of the white race first came to America the Indians they found here were barbarous. Some of them are barbarous still, but many of them have been educated in schools and have become civilized. They have been gradually driven west by the white people, until there are not many of them left in the eastern part of our country.

RED MAN.

The Malay peninsula at the southeast of Asia, and many of the islands in the Indian and Pacific Oceans, are inhabited by a race of people called the brown race.

You will learn many interesting things about the races as you study about the different countries in which they live.

38. Government.

Do you live in the country, or in a village, or in a city?

A place where there are not many houses near one another is called a country place. If there is a cluster of several houses near together, the place is called a village; and if there are a great many houses and people in a place, it is called a town or city.

BROWN MAN.

People must have laws to govern them; they must have officers to see that the laws are obeyed and that things needful for the general good are done. Making and carrying out the laws is government. The place where the laws for a country are made is called its capital; the building in which the law-makers assemble is called the capitol.

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CITY, COUNTRY, AND VILLAGE.

The people who make their own laws or have them made by their own rulers form a nation. The territory of an independent nation is called a country. The nation to which we belong is the United States of America, and a very large and strong nation it is.

The United States, France and Switzerland in Europe, and most of the countries of South America are Republics; that is, they are countries where the people choose their own officers and the men who make their laws.

The chief officer of a republic is called the President. Who is now the president of the United States?

There are other countries which are called Monarchies, where the one who is at the head of the government, the monarch, is not chosen by the people, but inherits his right to rule. This monarch is called a King or a Queen in Spain, an Emperor in Germany, a Sultan in Turkey, a Czar or a Czarina in Russia, a Mikado in Japan, a Queen or a King in England.

A CHINESE OFFICIAL.

The man who rules a savage or a barbarous tribe is called a chief.

A country governed by a king or queen is called a Kingdom.

A country governed by an emperor or empress, a czar or czarina, a sultan or a mikado, is called an Empire.

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There are many portions of the world that are not independent. They belong to some nation more powerful than they are. These dependent regions are usually called colonies or provinces.

There are a few independent countries in Africa, but most of this continent is divided into various regions that belong to nations in Europe. Australia is divided into several colonies that belong to the British Empire. The nations of Europe hold control of nearly all the important islands of the world except Japan.

REVIEW QUESTIONS.

What is a savage? Where are savages found? What are their wants? How do they live?

Who are barbarous people? How do civilized people differ from savages and barbarous people? What are the different races of men?

What do farmers do? Miners? Manufacturers? Traders? Upon what does the occupation of a place depend?

What is a country place? A village? A city? How is a city governed? What is government? What is the difference between a capital and a capitol? [The capitol is at Washington, the capital of the United States.] What is a nation? What is a country? To what nation do we belong? What is a republic? A monarchy?

CZAR OF RUSSIA.

MIKADO OF JAPAN.

QUEEN OF ENGLAND.

INDIAN CHIEF.

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RELIEF MAP OF NORTH AMERICA.

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NORTH AMERICA.

39. Relief and Drainage.

You have studied the continents as to their size and shape, and have learned where they are. Now you will learn about their mountain systems, their plains and lowlands, and their rivers.

A study of the elevations and slopes of the land may be called a study of *relief*, and a study of rivers and the basins which they drain may be called a study of *drainage*. A relief map is one which shows the highlands, lowlands, and slopes of the land.

On the opposite page is a relief map of North America, and above is a key map, on which are the names of the parts of the relief map.

Refer to these maps continually as you read the text and the questions.

The Highlands. — Where is the great mountain system of North America? Where is a smaller system? Where does the Rocky Mountain system lie nearest the Pacific Coast? Where farthest from it?

The Appalachian system, in the eastern part of North America, is shorter and lower than the Rocky Mountain system. Is it the same distance from the ocean in its northern and its southern parts?

The Lowlands and Drainage Basins. — The great central plain extends from the Gulf of Mexico on the south to Hudson Bay and the Arctic Ocean on the north. A low divide separates

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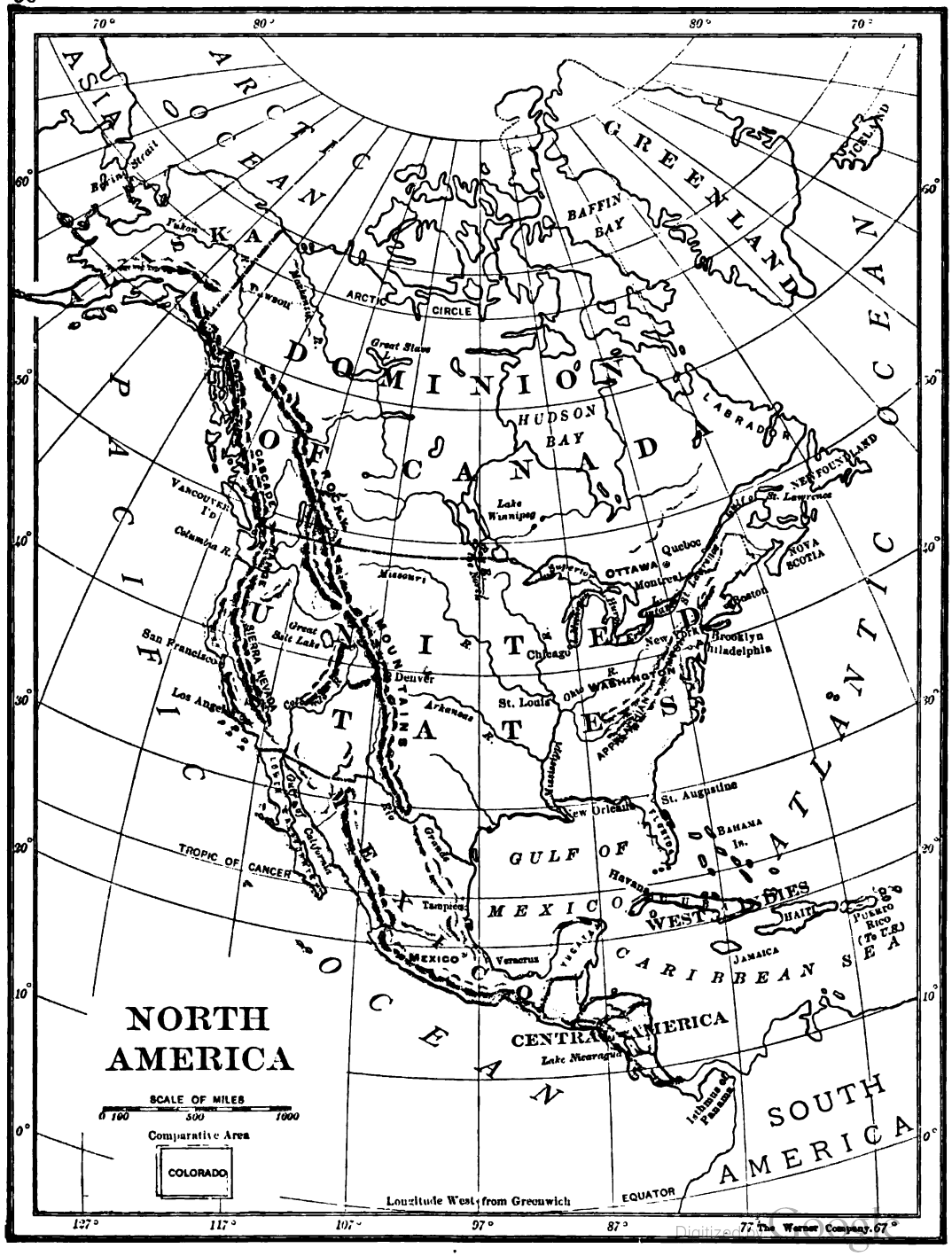

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the waters running south from those running north and east in this central plain.

On the map of North America trace with a pencil from the right bank of the Mississippi at its mouth around to the left bank opposite the place of starting without crossing any stream or body of water. See map, page 58.

The line you have traced shows the watershed of the Mississippi. Enclosed by this watershed is all the land drained by the Mississippi River. This is the basin of the Mississippi. Show on the map where this basin comes nearest to the Atlantic Ocean. Where nearest to the Arctic Ocean. Where nearest to the Pacific Ocean.

North America has an Arctic basin, a Hudson Bay basin, a St. Lawrence basin, an Atlantic and Gulf basin, a Mississippi basin, a Pacific basin, and also some smaller basins.

Trace each of these basins as you did the Mississippi basin.

The divide which separates the St. Lawrence basin from the Mississippi basin is so low that a canal has been cut from Lake Michigan to a tributary of the Mississippi.

The head waters of the Red River of the North almost mingle with those of the Mississippi. See map, page 68.

The Hudson Bay basin and the St. Lawrence basin might be considered part of the Atlantic basin.

Of what basin might the Mississippi basin be called a part?

Which of the drainage basins of North America is the largest? Name two rivers of the Atlantic system. Name one important tributary of the Mississippi on the east and one on the west. Find two important rivers of the Pacific basin. What is the chief river of the Arctic basin? In which basin are the Great Lakes?

40. Animal Life of North America.

Many of the animals in the northern part of North America, such as the seal, the polar bear, the sable, and the Arctic fox, are hunted for their valuable fur.

SEALS.

Seals live together in herds. They are sometimes carried southward from the polar regions upon blocks of ice which have broken off from the main body of ice, and are captured off the coasts of Newfoundland and Labrador.

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The skins of seals are made into leather. The oil made from their layers of fat, or blubber, is used in tanning and in making soap. The seals whose fur is valuable are found in Bering Sea.

The polar bear, sometimes called the white bear, is the largest of all bears. It is a very heavy animal, weighing sometimes as much as ten men together, but it is a good swimmer and diver, and in the icy waters of the far north it dives for the fishes which it eats.

POLAR BEAR.

It will watch many hours at a hole in the ice under which it knows a seal has come for air, and then, with one powerful blow of its paw will kill the seal as it comes up to the surface of the ice.

The walrus is a huge animal that lives on the ice and the shores near by. It is captured mostly for its ivory tusks. Its thick skin is useful for making tough leather for harness, while the blubber underneath its skin yields a valuable oil.

WALRUS.

The whale has a much thicker layer of blubber than the walrus, and it is for this blubber and the whalebone found in its mouth that it is hunted and killed.

GRIZZLY BEAR.

The skin of the musk-ox, so named from its odor, is made into clothing by the people of the Arctic regions.

The fiercest animal of our continent is the grizzly bear, whose home is in the Rocky and Sierra Nevada mountain region. It is strong enough to kill an ox and carry off its heavy body. Other wild animals are afraid of it.

BLACK BEAR.

WOLF.

The grizzly bear has long hair, a mixture of brown, black, and white in color.

Black bears and wolves live in the northern forests.

ROCKY MOUNTAIN GOAT.

Among the Rocky Mountains there are flocks of wild sheep and goats.

Herds of bison, huge animals re-

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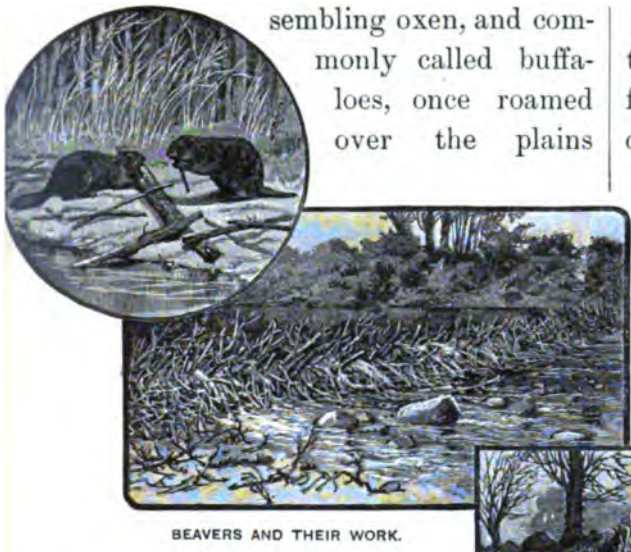
sembling oxen, and commonly called buffaloes, once roamed over the plains



BEAVERS AND THEIR WORK.

of North America, but they are now found only in parks and zoological gardens.

In Canada, beavers build houses of trees, brush, and stone plastered together with mud. These houses are quite as skillfully made as the abodes of some savage tribes of men.

DEER.

The houses are built in the water, with the entrance below the surface. To keep the water high enough in summer, the beavers often build dams across the stream. Their food is the roots of water lilies and other plants, and the bark and tender twigs of the trees growing by the lake or river.

Deer and antelopes are also found in this continent. These animals are very graceful in form and very timid and swift. The horns of deer are shed every year, and another pair grows very quickly, while those of the antelope grow slowly and are not shed. In every continent, except Australia, some deer and antelopes are found.

BISON.

The eagle is the swiftest and fiercest of North American birds. Why is the picture of the eagle so common in the United States?

EAGLE.

In countries around the Gulf of Mexico live fierce reptiles called alligators. Hard plates protect the

ALLIGATOR.

back and sides of these reptiles. Like snakes and turtles, alligators lay their

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eggs in the sand and leave them there to be hatched by the sun. In the dry season, they bury themselves in the mud and sleep.

41. Countries of North America.

Look at the map and name the countries of North America. What country occupies the best part of North America? What country is north of it? South?

The peninsula of Alaska in the northwestern part of North America is a part of the United States.

Central America is not one country, but contains several independent countries.

The capital of the United States is Washington; that of the Dominion of Canada is Ottawa; and that of Mexico is the City of Mexico.

Point out these cities on the map and tell where each is situated.

Greenland is a large island belonging to Denmark, and so is often called Danish America. Find Denmark on the map, p. 123.

REVIEW QUESTIONS.

What part of North America is in the torrid zone? In the temperate zone? In the frigid zone? Bound North America.

Name two islands that belong to North America. Are there many islands near North America? How many large gulfs and bays are there around North America? What two large bodies of water are there between North America and South America? Find five peninsulas of North America. Name them and tell where each is. Is there a gulf or bay near each?

42. The First Inhabitants of America.

COLUMBUS.

Four hundred years ago, when Columbus reached the western continent, he did not know that he had discovered a new world, but thought he had come to India, in the eastern part of Asia. He therefore called the people whom he found, Indians, and by this name all the native people of North and South America have since been called.

These Indians were quite unlike any people of the Old World. They were reddish brown or copper-colored, and hence were called Red Men. They painted their faces and bodies so that they were hideous looking. On their heads they wore feather plumes,

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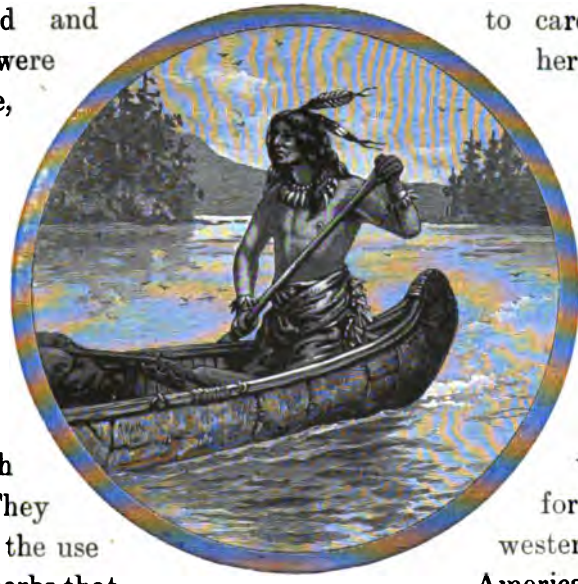
around their bodies a girdle and short skirt, on their legs leather leggings, and upon their feet shoes of soft leather, which they called moccasins. Sometimes they put on long robes of buffalo or deer skin, which often had a deep fringe made of hair taken from the heads of the men whom they had killed and scalped. They were savages, you see, but they were very skillful in making bows and arrows and birch-bark canoes, in hunting and fishing, and in finding their way through dense forests. They knew much about the use of the plants and herbs that grew in the forests. They were strong, and could endure a great amount of fatigue or pain without showing any signs of suffering.



INDIAN IN BIRCH-BARK CANOE.

When the people from the different European countries came to North America and settled in colonies, wars arose among the colonies, and the white men asked the Indians to help them in their battles. They taught the red men how to use firearms; soon these savage tribes were using firearms so effectively in warfare among themselves as well as against the white men, that their numbers were greatly diminished. After a time many of them learned how to cultivate the soil and to care for flocks and herds, and gradually they settled down to a peaceful life.

Indians are now found in nearly all parts of South America, especially in the secluded valleys and dense forests, and in the western part of North America.

How many of you have ever seen an Indian? There are not many tribes living east of the Mississippi River, but perhaps you have seen their encampments in summer and have bought some of their prettily woven baskets.

In the Indian Territory are people belonging to the Indian tribes who are as intelligent as the people of other parts of our country. In some of our western states there are other

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WIGWAM.

tribes who are still savages. In summer they live in what they call wigwams, tents made of cloths or bark stretched over poles. For winter they build huts of logs or wood.

INDIAN MOTHER AND PAPOOSE.

In Alaska, in front of some Indian homes are strange-looking poles, carved with faces of men and beasts.

These totem poles, as the Indians call them, represent the story of their lives. Upon this page is a picture of two such poles. How high do you think they are?

In some Indian tribes the mother straps her baby, which is called a papoose, to a queer sort of cradle.

INDIAN CRADLE.

It is a piece of board with a slip of wood at the bottom for the baby's feet to rest upon, and to this he is bound so tightly that he cannot move hands or feet. Around his head a hoop of wood is put to keep it steady, and from the hoop are sometimes hung bells, feathers, and bright rags to amuse him. Sometimes the papoose is left hanging in his cradle from the limb of a tree, or is carried upon his mother's back and supported there by a broad band passed around her head. In some tribes, when a baby dies, the mother fills his cradle with black feathers, and carries it around on her back for a whole year afterwards.

TOTEM POLES.

Some tribes on our northwestern coast strap a board or bag of sand to the foreheads of their papooses so as to make their heads slant backward to a peak, as they do not think that round heads are pretty. The picture on the next page shows you how it is done.

The Indian boy learns to shoot and to ride, and he is very happy in running races, wrest-

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ling, swimming, hunting, and fishing. The girl learns to sew, to skin animals and to cook them, to hoe in the garden, and to take down and put up the tents when the family moves to another camp.

How did the Indians get their name? How did they look? How did they dress? In what were they skillful? Do they live now as they lived in the time of Columbus?

Where are they now found? What is a wigwam? A totem pole?

How do some Indian mothers take care of their babies? What does the Indian boy learn to do? The Indian girl?

PAPOOSE OF FLAT-HEAD TRIBE.

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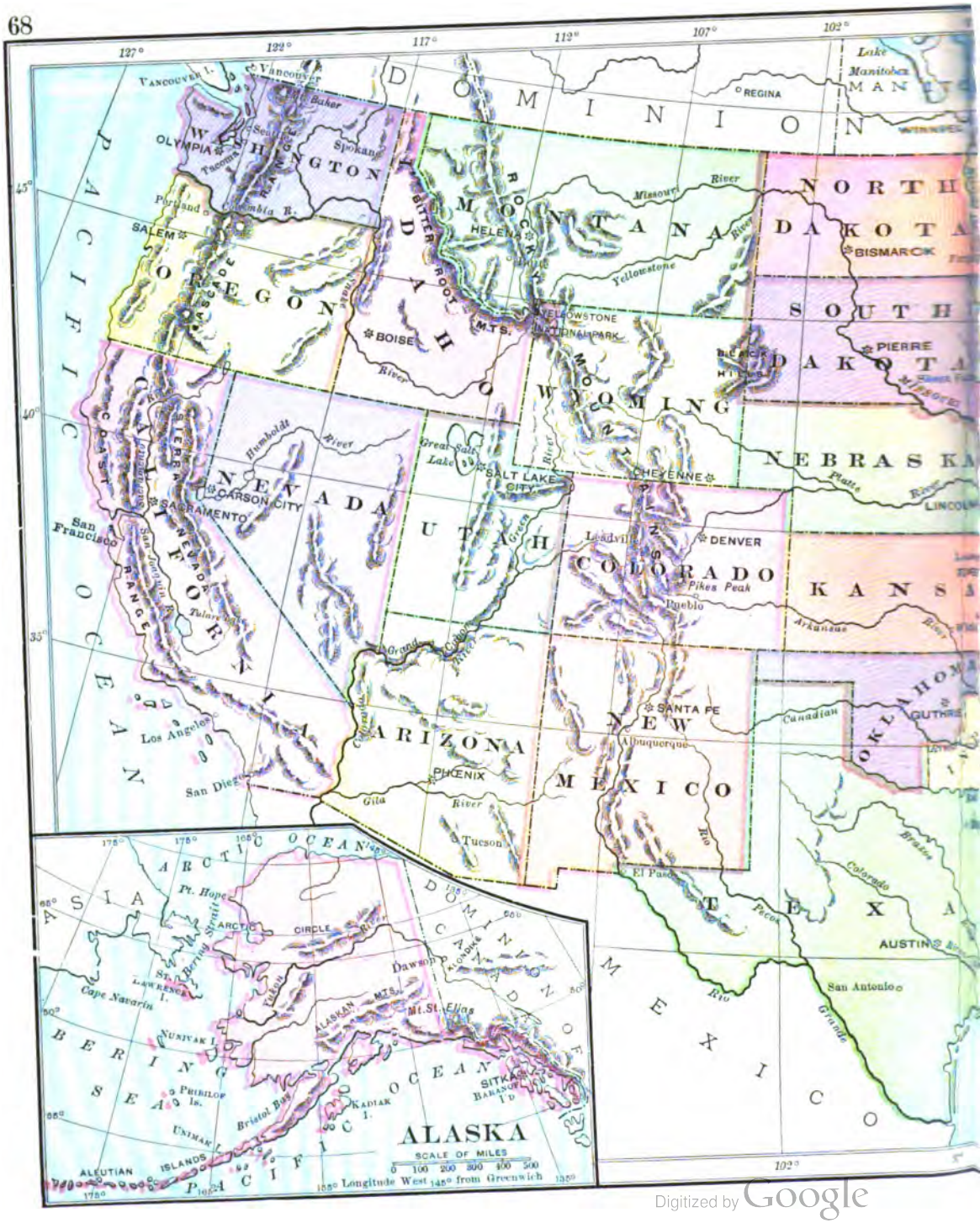

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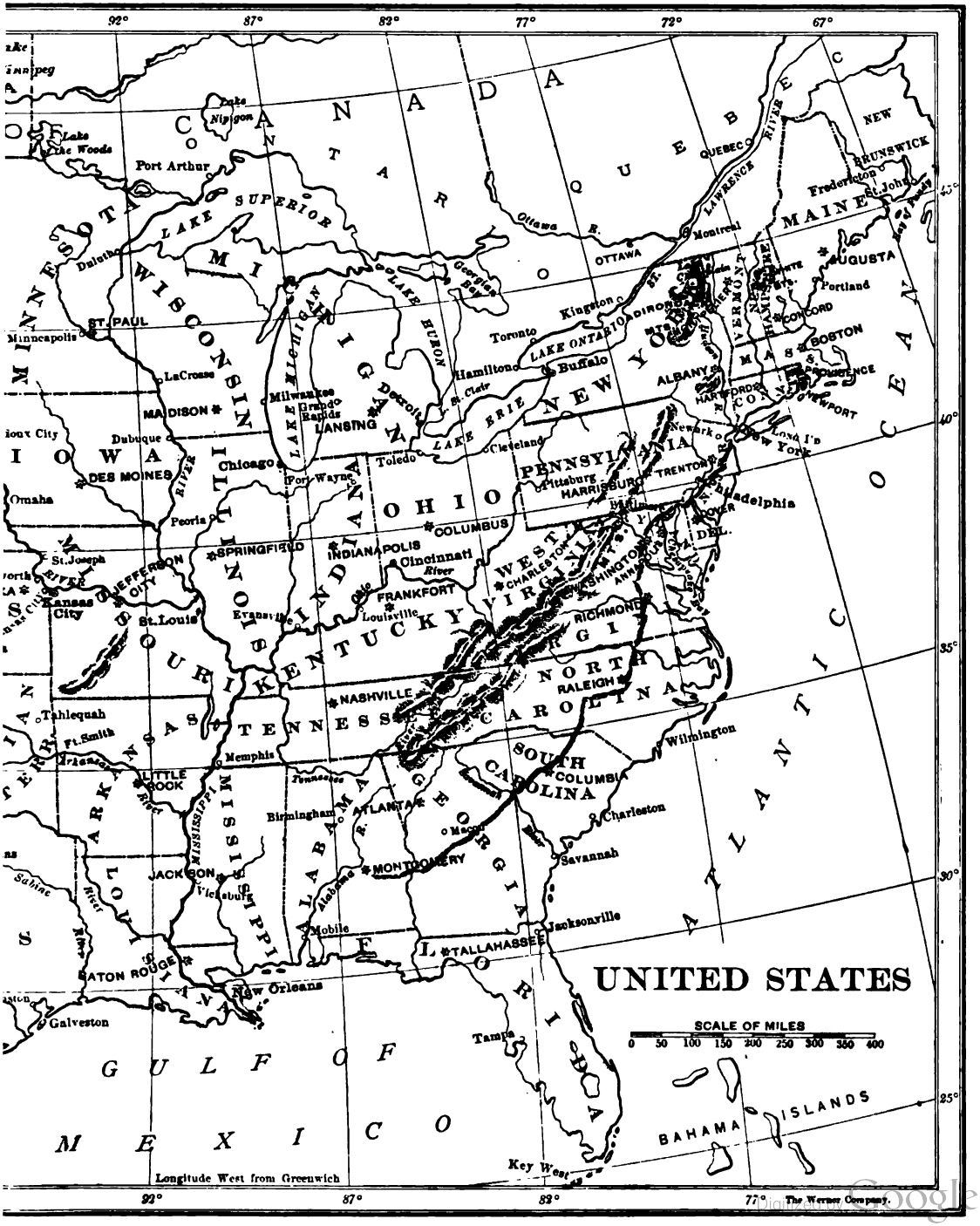

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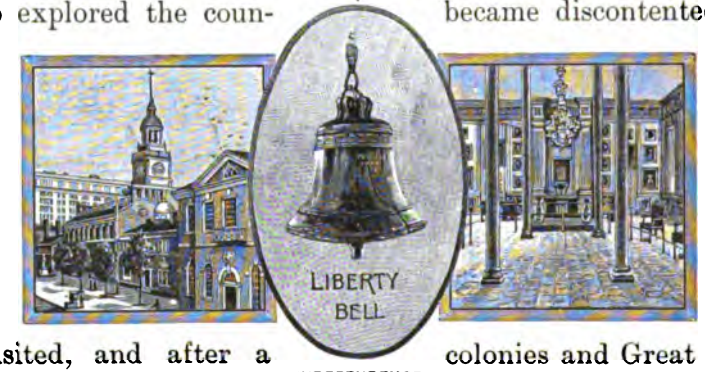
THE UNITED STATES.

43. Early Settlements.

Many other voyages besides those of Columbus were made to this new world by bold sailors from across the Atlantic who explored the country a little and then returned home.



INDEPENDENCE HALL.

These explorers took back good accounts of the country they had visited, and after a while people began to come over here to make this land their home. The first town in our country was built by the Spaniards (people of Spain) at St. Augustine, Florida. Find this place on the map. See page 84. Later, the English came to this country.

The English continued to come to this country in great numbers, and people from other nations of Europe also came, until there grew up, in the eastern part of what is now the United States, thirteen separate colonies. These thirteen colonies all finally came under the control of Great Britain, the country of the English in Europe. The colonists became discontented at the way they were governed, and finally a war, called the American Revolution, arose between the colonies and Great Britain. The thirteen colonies united to form a new nation, and called themselves the United States of America. It was on the 4th of July, 1776, that the people declared they would no longer be governed by England. How do we celebrate that day?

Above is a picture of Independence Hall, Philadelphia, of the room within the Hall where the Declaration of Independence was signed, and of the bell that was rung to tell the news.

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44. Divisions and Extent.

The United States now consists of forty-five states, five territories, and one district. Where is the capital?

The chief officer of our nation is the President, who is elected by a body of men chosen by the people.

In each state the chief officer is the governor, who is elected by the people.

In the territories the governors are appointed by the president.

In most of the states the smaller parts into which they are divided are called counties. What are these divisions called in your state?

The United States extends from the Atlantic Ocean to the Pacific Ocean, about three thousand miles, and from Canada to the Gulf of Mexico, about twelve hundred miles. With the exception of Alaska, it is wholly within the north temperate zone. It has a great variety of surface, soil, climate, and productions.

REVIEW QUESTIONS.

What vegetables now widely used were first found in America?

Where was the first settlement in America made? By whom?

When was the Revolutionary War? With what country? How many colonies took part in it? How many states and territories are there now?

45. Relief of the United States.

Turn to the relief map of North America, p. 58.

In the western part of the United States is a broad belt of high land, consisting of a plateau upon which are many ranges of mountains.

This highland is nearly one thousand miles broad, and occupies about one-third of the United States.

What highlands are there in the eastern part of the United States? How do the eastern highlands compare in width with the western highlands? In height? In length? What lies between the eastern and the western highlands? How wide is the great central plain from east to west? How long is it from north to south?

Between what four drainage basins does the Appalachian system lie?

46. Rivers and River Basins.

The chief river is the Mississippi, which drains the great central plain.

The Mississippi and its tributaries resemble an immense tree. The Mississippi is the trunk with its roots in the Gulf of Mexico and its branches, which are its tributaries, stretch

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outward to the Rocky and the Alleghany Mountains.

In what general direction does the Mississippi River flow? In what direction do its western tributaries flow? Its eastern? Notice what a long river the Missouri and the Mississippi together make, the longest river in the world.

The source of the Mississippi is in a small lake in the northern part of the United States, in a region from which waters flow in several directions.

Find this region on the map and tell what rivers have their sources there, and in what direction each flows. See map, page 93.

In what general direction do the rivers between the Bay of Fundy and Chesapeake Bay flow? Between Chesapeake Bay and Florida? Between Florida and Mexico?

A LAKE NEAR THE SOURCE OF THE MISSISSIPPI.

Trace the Ohio basin. How far east does it extend? North? South?

Trace the Appalachian watershed. Where is it broken through? Trace the Rocky Mountain watershed from Canada to the great bend in the Rio Grande. Are there any breaks in this watershed? Find four large rivers rising near together in the Rocky Mountain system. Trace their waters to the ocean.

What part of the United States is in the St. Lawrence basin? What part is in the Hudson Bay basin? What part is drained by streams flowing into the Pacific Ocean? What by streams flowing into lakes without an outlet?

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47. Products.

In the great central plain the land is generally level and very fertile. The climate varies from warm in the south to cool in the north, and there is sufficient rainfall for growing plants.

What do you think would naturally be the chief industry of the people of this part of the United States?

A FISHING BOAT.

In the northern part of this plain wheat is the great product; in the central, corn and tobacco; in the southern, near the Gulf, cotton and sugar-cane.

In the western part of this plain, close to the base of the Rocky Mountains, the rain is not sufficient for good crops, though grass grows scantily, and supports herds of cattle.

Minerals are found in the rocks. It is easier to dig into the rocks in the side of a mountain than to dig into the rocks beneath the soil of a valley. For this reason, minerals are usually mined in the mountains.

Name some of the principal mining regions of the United States.

In the Appalachian region are found iron and coal, in the Rocky Mountain region gold, silver, quicksilver, lead, and some iron and coal.

Where is manufacturing more extensive, in the Appalachian or in the Rocky Mountain region? Give three reasons for your answer.

There are three parts of the United States in which many of the people are engaged in fishing. Where are these parts?

Which parts of the United States are best adapted for manufactures? Why? Which are most suitable for commerce? Why?

Are grazing regions as populous as farming regions? Are farming regions as populous as manufacturing regions? Are mining regions likely to have a very large population? Give reasons for your answers.

48. Sections.

On page 74 is a map of the United States divided into sections. How many sections do you find? That which is true about a section

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is generally true about all the states within the section. It will be much easier to learn about eight sections than about forty-five states.

Which sections border the Atlantic? Which, the Gulf of Mexico? Which, the eastern bank of the Mississippi? Which, the western bank? Which section is crossed by the Rocky Mountains? Which section borders the Pacific? Which sections border the Great Lakes? Which border Canada? Tell why each section is called by the name given it. As you study each section turn to this map and see where the section is located.

49. The New England States.

The states in the northeastern section of the United States received the name of New England from the early settlers who came to this part of our country from England.

Name the New England States. How many states can you find that are as large or larger than New England? Which states of this group touch Canada? Which states have a seacoast? Which state is wholly inland? Which is the largest state? The smallest?

The mountains of New England are

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ON THE COAST OF MAINE.

not very far from the coast, and the surface is hilly; hence the rivers are nearly all short and swift.

ON THE CONNECTICUT RIVER.

Wherever the water tumbles down a hill or falls over a dam, it can be made to furnish water power to turn machinery. As water power is cheaper than steam power, many towns and cities with busy factories have been built close by rapids and waterfalls, and thus the rivers of New England have made this part of the country the chief manufacturing section.

The climate of these states, especially in the northern parts, is very cold in the winter, and very hot in the summer.

The soil is rocky and poor, except in the river valleys. The Connecticut valley is very fertile, and in its lower part much tobacco is raised.

There are large pine forests in Maine and New Hampshire, and many of the people of these states are lumbermen. During the winter the woodcutters live in the forest. Some fell the trees, and others drag the logs over the snow to the nearest river. In the spring the logs are floated down the streams to the sawmills. Sometimes the logs get crowded together in a "jam" at some

A NEW ENGLAND FACTORY.

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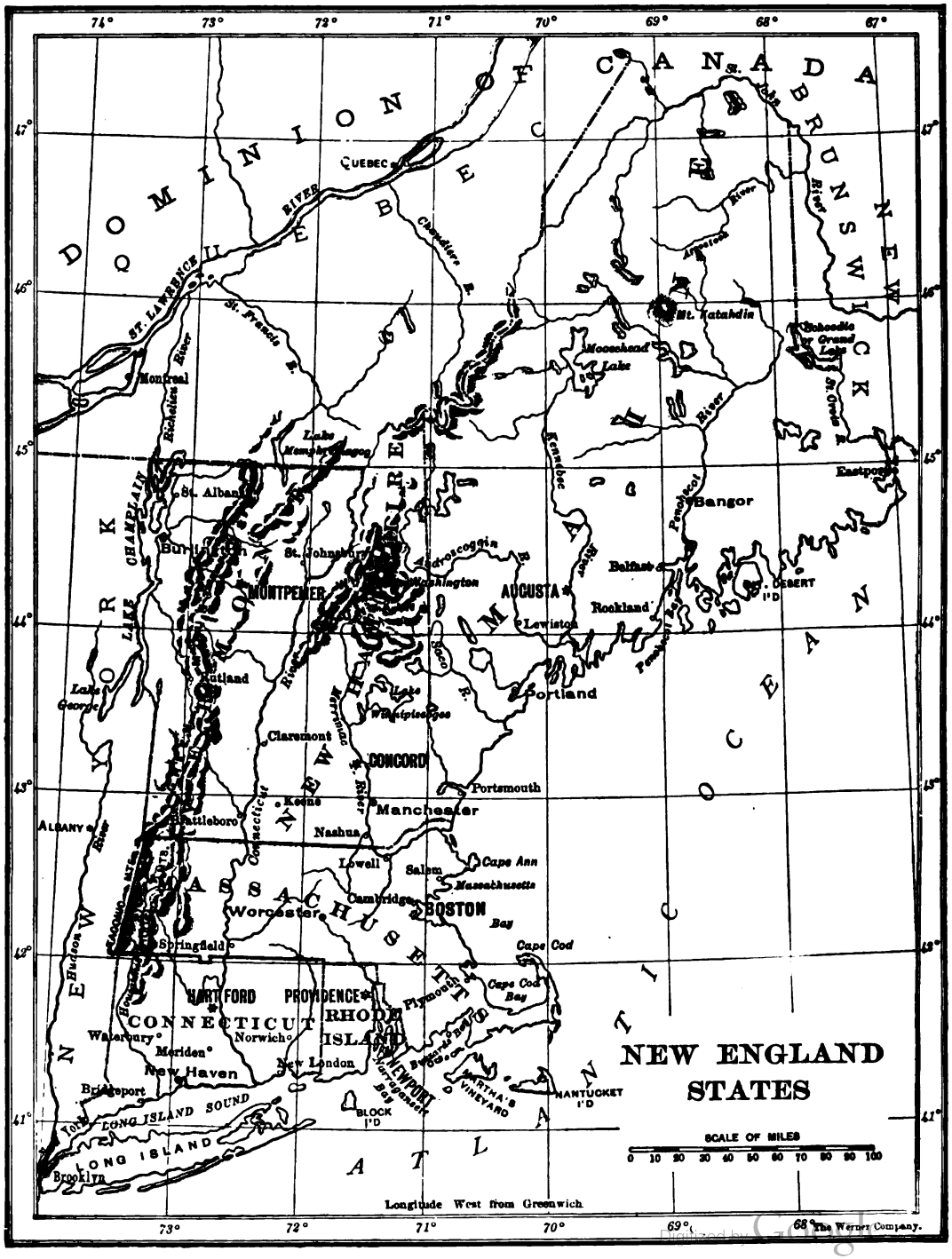
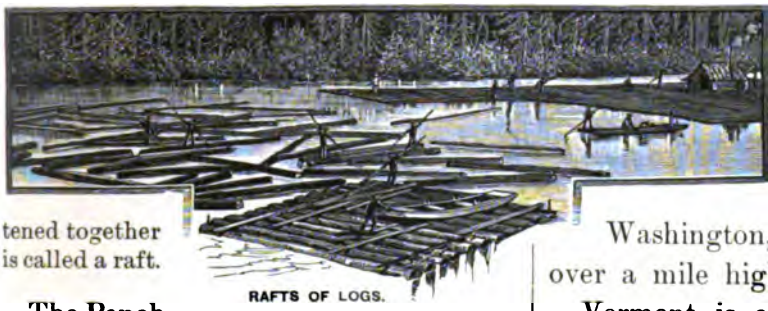

NEW ENGLAND STATES
SCALE OF MILES
0 10 20 30 40 50 60 70 80 90 100
Longitude West from Greenwich
DOMINION OF CANADA
QUEBEC
NEW BRUNSWICK
NEW YORK
MASSACHUSETTS
CONNECTICUT
RHODE ISLAND
NEW HAMPSHIRE
MAINE
ATLANTIC OCEAN
ST. LAWRENCE RIVER
LAKE CHAMPLAIN
LONG ISLAND SOUND
LONG ISLAND
Quebec
Montreal
St. Albans
Burlington
St. Johnsbury
MONTPELIER
Rutland
Lake George
Claremont
CONCORD
Keene
Brattleboro
Albany
Nashua
Manchester
Portsmouth
Lowell
Salem
Cambridge
BOSTON
Worcester
Springfield
HARTFORD
PROVIDENCE
Waterbury
Meriden
Norwich
New Haven
New London
Bridgeport
Brooklyn
Cape Ann
Massachusetts Bay
Cape Cod
Cape Cod Bay
Plymouth
NEWPORT
Narragansett Bay
BLOCK I'D
MARTHA'S VINEYARD
NANTUCKET I'D
Mt. Katahdin
Moosehead Lake
Schoodic or Grand Lake
Eastport
Bangor
Belfast
Rockland
Lewiston
AUGUSTA
Portland
Lake Winnipiseogee
Washington
Androscoggin R.
Kennebec River
Penobscot River
Penobscot Bay
Saco R.
Merrimac River
Connecticut River
St. Francis R.
Richelieu River
Chaudiere R.
Aroostook River
St. Croix R.
Hudson River
Housatonic R.
Lake Memphremagog
Longitude West from Greenwich
The Werner Company.

narrow place, and then the drivers, who have been following in a canoe, must walk out on the logs and pry them apart to get them started again. A number of logs fastened together is called a raft.



RAFTS OF LOGS.

The Penobscot is the chief lumbering stream.

In Maine, New Hampshire, and Vermont there are many men employed in the granite and marble quarries.

In Maine and in Massachusetts there are many fishermen who catch cod, mackerel, and herring off the coasts. The fish are salted down, and sent to other states. These fisheries are the most important in the United States.

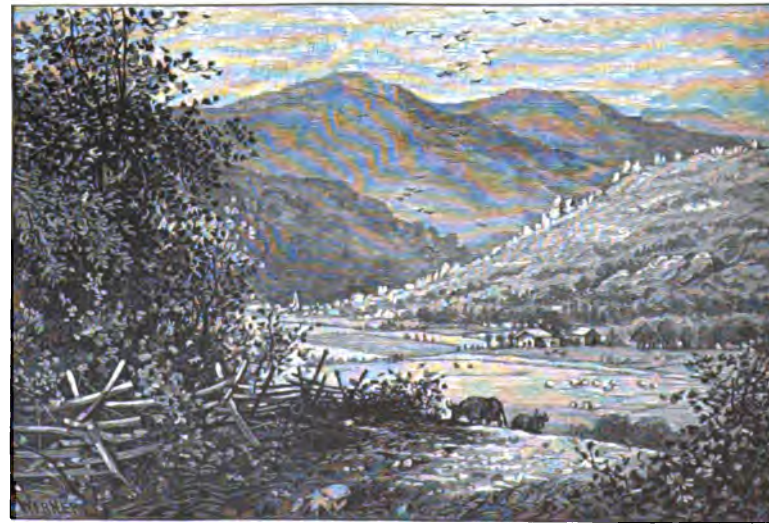
In New Hampshire are the White Mountains, and in Vermont the Green Mountains. Can you tell by their names which mountains are the higher? To which mountain system do these mountains belong?

New Hampshire is famous for the beautiful scenery among its mountains, and many people from other states go there to spend the summer. Mount Washington, the highest peak, is over a mile high.

Vermont is a good grazing state. It is noted for its fine horses, sheep, and cattle, and also for its maple sugar.

The sugar-maple tree grows in the northern part of the United States and in the southern part of Canada.

Massachusetts, Rhode Island, and



THE GREEN MOUNTAINS.

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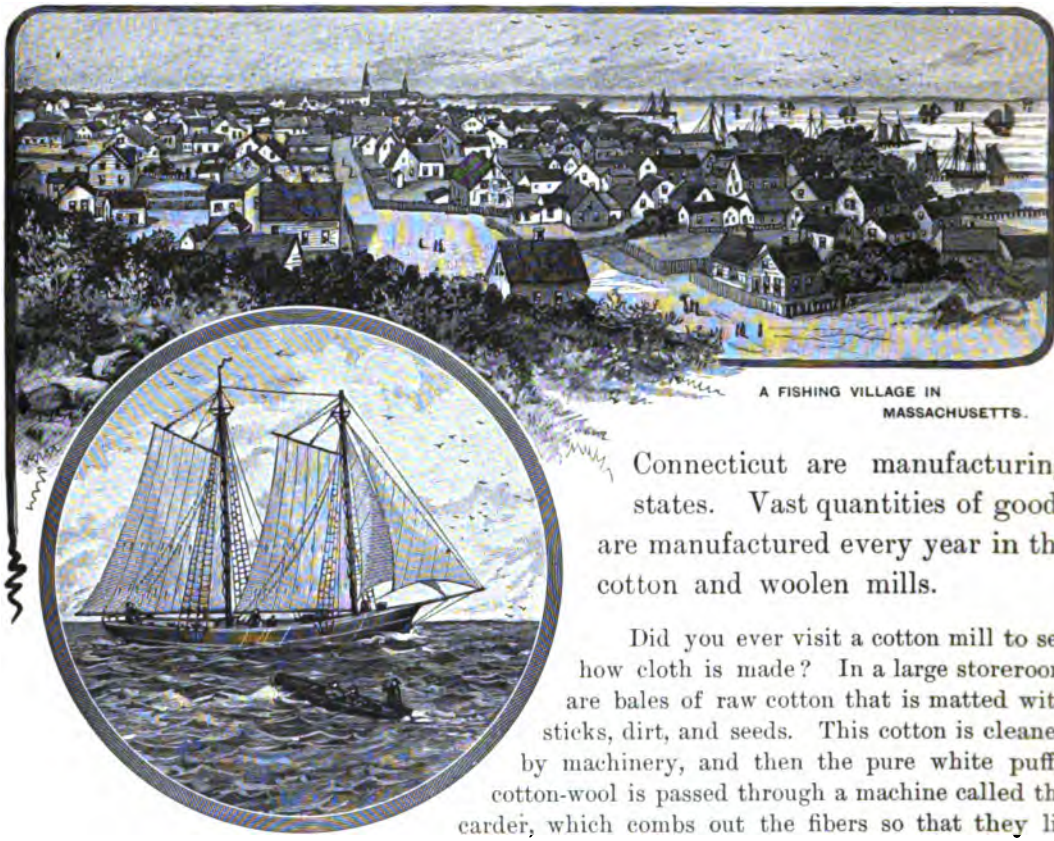

A FISHING VILLAGE IN MASSACHUSETTS.

Connecticut are manufacturing states. Vast quantities of goods are manufactured every year in the cotton and woolen mills.

Did you ever visit a cotton mill to see how cloth is made? In a large storeroom are bales of raw cotton that is matted with sticks, dirt, and seeds. This cotton is cleaned by machinery, and then the pure white puffy cotton-wool is passed through a machine called the carder, which combs out the fibers so that they lie straight. Another machine, the spinner, twists the fibers into threads, and a loom weaves these threads into cloth. Unravel a piece of calico and see how the threads cross, running in and out, over and under one another.

In these states more clocks, firearms, sewing machines, boats, boots and shoes, thread, and jewelry are made than anywhere else in the United States.

The people of these states manufacture also linen goods, paper, locomotives, farming

THE WHITE MOUNTAINS.

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tools, and all kinds of hardware, pianos, and furniture.

What raw materials are used in making these different kinds of manufactured articles?

Massachusetts has many great cities. Boston, Worcester, Fall River, and Lowell are its largest cities.

LONGFELLOW'S HOUSE AT CAMBRIDGE.

Providence is the largest city of Rhode Island, and New Haven is the largest city of Connecticut.

REVIEW QUESTIONS.

Where are the New England States? What is their climate? Are they good farming states? Are they good grazing states? What is the difference between farming and grazing? Have these states any important mines?

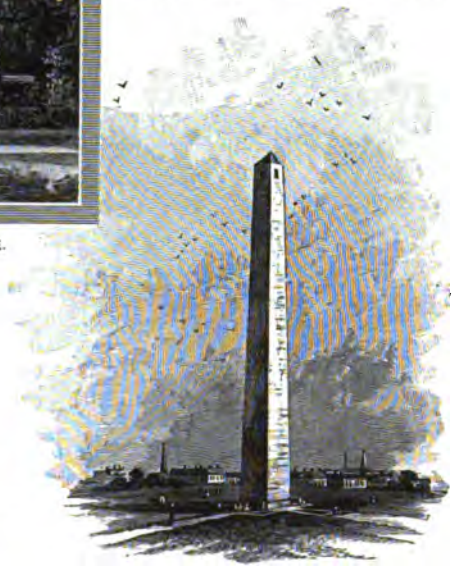
Which is the greatest lumbering state? Which states have important fisheries? Which raises most tobacco?

Which is the Green Mountain State? The White Mountain State? How high is Mount Washington? The Green Mountains and the White Mountains are a part of which system?

Why are manufacturing establishments located in or near cities? Why are more goods manufactured in the southern New England States than in the northern?

Name the New England States. Are these states large? Are they rich and populous? Is the coast of New England regular or irregular? Are more harbors found where the coast is regular, or where it is irregular?

Is New England a rough or a level section? Where are the pine forests? The maple groves? The quarries? The fisheries? Name the capitals of the New England States. Which are the largest cities?



BUNKER HILL MONUMENT.

Select all that is said about Vermont, thus: Its position, mountains, climate, soil, quarries, for what noted. Add anything else you may know about Vermont, or can learn from the map; arrange these topics in a good order; then write a description of Vermont.

Write what you know about each of the New England States.

50. The Middle Atlantic States.

Name the states of this section.

Which are the largest states? Which is the smallest one? Which border the Atlantic?

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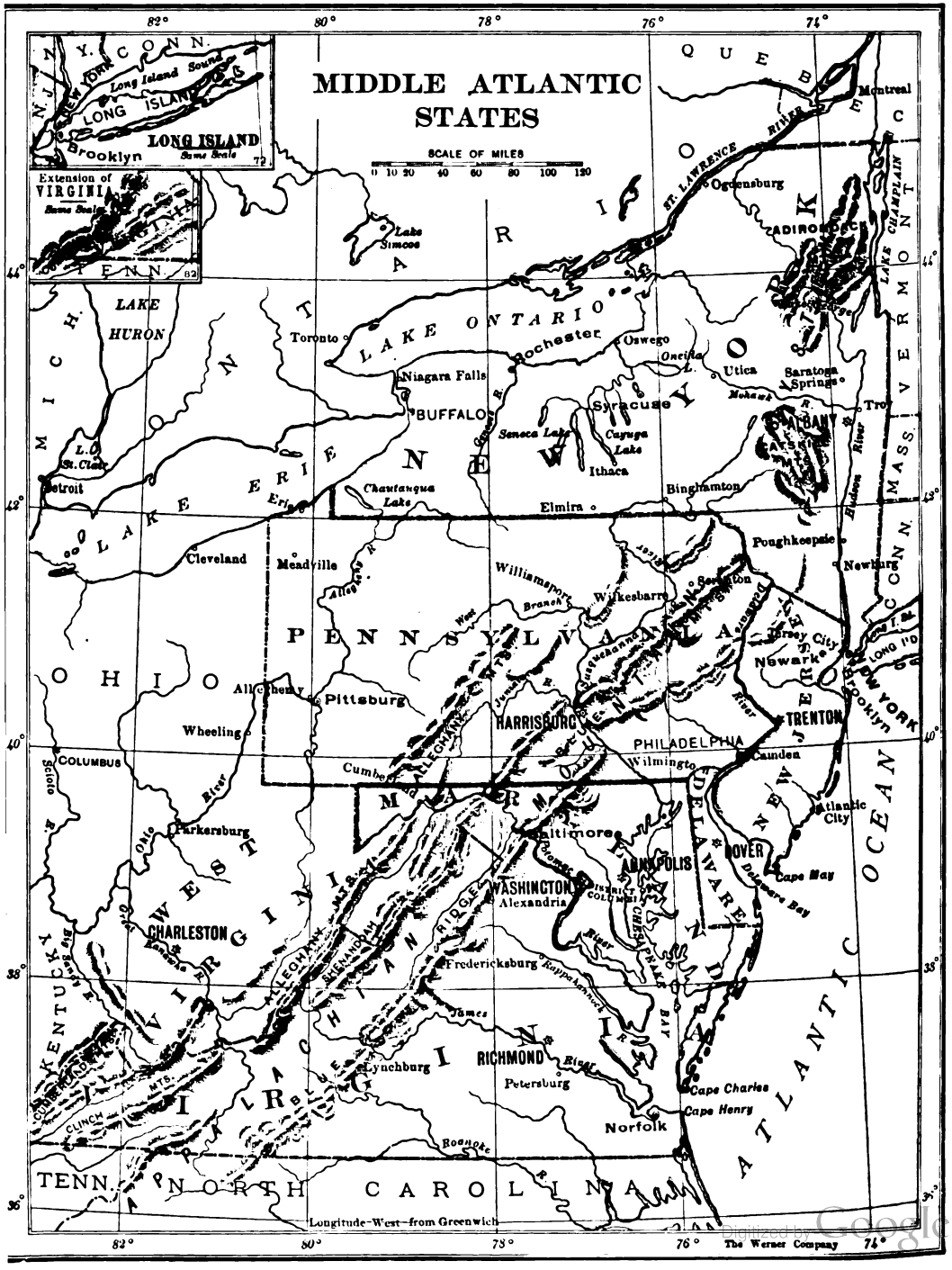

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In what drainage basins do these states lie? What mountain system crosses them? What mountains in New York belong to this system? What are the long ranges farther south called?

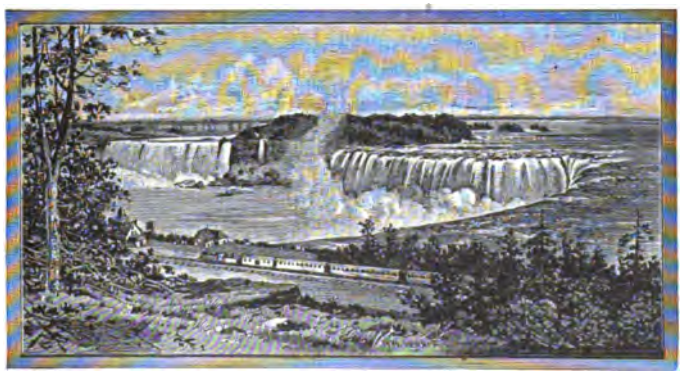
In the Adirondack Mountains rises the Hudson River, the most beautiful river in our country. What great city is situated at the mouth of the Hudson?

Where does the Delaware River rise? Into what bay does it flow? What large city is on the Delaware?

Find the source of the Potomac River. Into what bay does it flow? What large city is on the Potomac?

In the states that border the ocean the land along the shore is level and in some places marshy. Farther from the shore are rolling lands and rounded hills, and beyond them are the long ranges of the Blue Ridge, the Alleghany, and other mountains.

The climate of New York is much like that of New England. What is the climate of the states that lie farther south?



NIAGARA FALLS.

These states are better for farming than the New England States are, and the farmers raise great crops of hay, corn, oats, and potatoes.

Coal and iron are found in this section, and water-power is abundant. There are a few fine harbors along the Atlantic coast, and rivers, canals, and railroads connect these harbors with the states farther west. The people are largely engaged in manufacturing, mining, and commerce.

There are many beautiful lakes in New York. On its western border are two of the Great Lakes, Erie and Ontario. These two lakes are connected by the Niagara River, in which are the greatest falls in the world. Where does all the water come from that is constantly pouring over Niagara Falls?

At Buffalo, on Lake Erie, begins the Erie Canal, which connects the lake with the Hudson River at Albany. On this canal a vast amount of grain is carried in boats, which are towed

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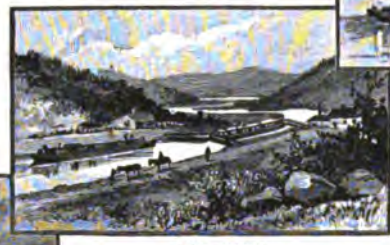
along by horses. How long do you think it would take to cross this wide state in such a way?

Lake Champlain is a beautiful sheet of water separating New York and Vermont and extending into Canada.

HUDSON RIVER.

There are more people in this state than in any other, and it has many large and flourishing cities. When the Dutch settled on the island where New York City stands, they bought the land from the Indians for about twenty-five dollars. Now the largest city in the United States is here. It manufactures more goods and has more commerce with other nations than any other American city. Adjoining its fine harbor are several other great cities, Brooklyn being the largest.



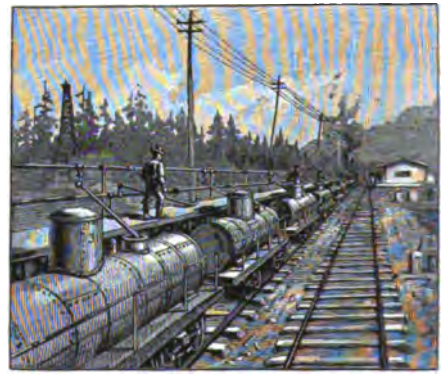
ERIE CANAL.

LAKE ERIE.

Long Island is a part of the state of New York. Where is it situated? In Pennsylvania there are many coal and iron mines and petroleum wells.

Wells have been bored into the rocks far down in the earth, and up through these wells the petroleum rushes with great force. From petroleum, kerosene, or coal oil, is made. Besides kerosene, what else is used to furnish light? In many places where there are oil wells, natural gas has been found.

This picture shows a train of tank cars which are being filled with oil from pipes.



TANK CARS.

Many, many thousands of years ago, this region was covered with monster trees, ferns, bushes, and shrubs in dense masses, which died and decayed in the swampy ground where they had grown. After long ages this mass of vegetation settled. The waters covered it, leaving deposits of sand and pebbles which hardened into rock. Under the pressure of this deposit the vegetable mass was gradually changed into the coal now found so far below the surface of the earth.

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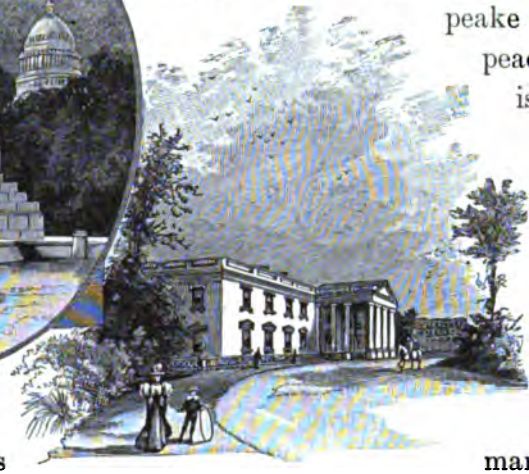
PEACE MONUMENT.



THE WHITE HOUSE.

In Pennsylvania iron and steel ships are built, and various articles are manufactured of iron. Philadelphia, the largest city in Pennsylvania, is one hundred miles from the ocean; but large ocean steamers reach the city, by way of Delaware Bay and River. Here are great iron and steel and woolen manufactories, and the city is known as the greatest carpet-manufacturing city in the world.

In Pittsburg there are manufactures of iron and glass. Where is this city situated?

The people of New Jersey and Delaware raise many peaches and small fruits and vegetables, which are sent to the northern markets.

Newark, the largest city in New Jersey, is one of the most important manufacturing cities in the United States.

In Maryland, east of the Chesapeake Bay, there are large peach orchards. Tobacco is raised, but the most profitable industry of this state is the fisheries of the bay. The oyster beds are the finest in the world. Find out how oysters are obtained.

Baltimore is a large manufacturing and commercial city. By means of a canal across Delaware ships can go from this city to Philadelphia.

The District of Columbia contains Washington, our national capital.

Above are pictures of the White House (the home of the President of the United States), of one of the fine monuments of the city, and of the dome of the Capitol.

In Virginia and Pennsylvania large quantities of tobacco are raised. In West Virginia are coal mines, oil-wells, fire-clays, salt, and great forests.

Richmond has large iron works, tobacco factories, and flour mills. Where is it situated?

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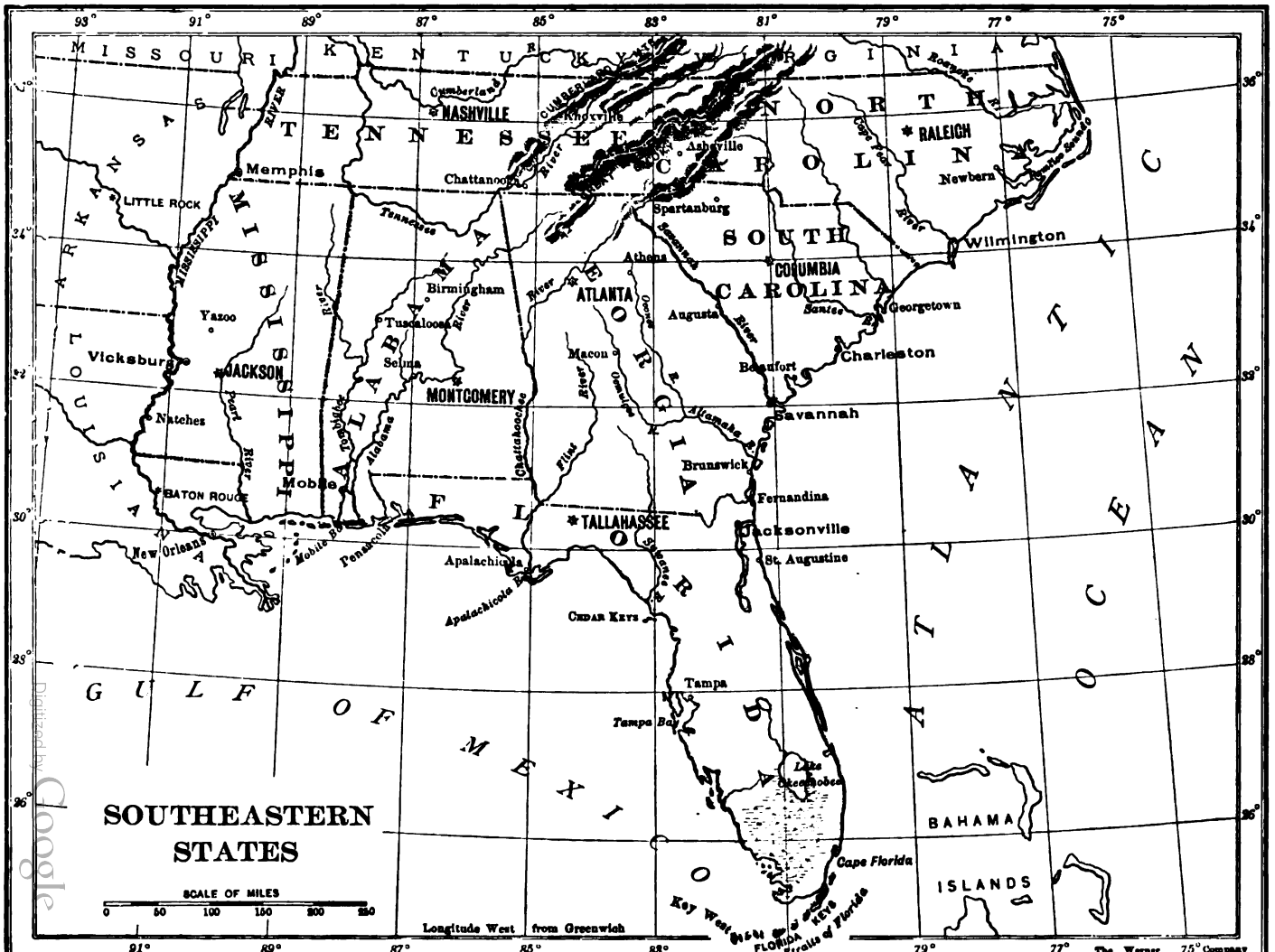

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REVIEW QUESTIONS.

Where are the Middle Atlantic States? Why so called? How many are there? Name them. Describe the seacoast of these states. Which is the only large city on the seacoast?

Do you think there are good harbors in these states south of New York?

Name the rivers of this section. Where is Niagara Falls? Name three lakes bordering New York. Find two important bays. Name some advantages which New York has for trade.

What are the chief occupations of the people of the Middle Atlantic States?

Which is the mining state? What kind of mines has it? What can you say of its chief city?

In which states is coal oil, or petroleum, found?

What advantages has Pittsburg for manufacturing iron and glass? Do you think it a good place for manufacturing cotton?

Which are the largest of these states? In which of these states do the people raise tobacco? What are the products of New Jersey and Delaware? Why are these products raised in these states?

In which state are many of the people engaged in fisheries? Name the cities in the Middle Atlantic States noted for both commerce and manufactures. Name three that are more important for their manufactures than for their commerce.

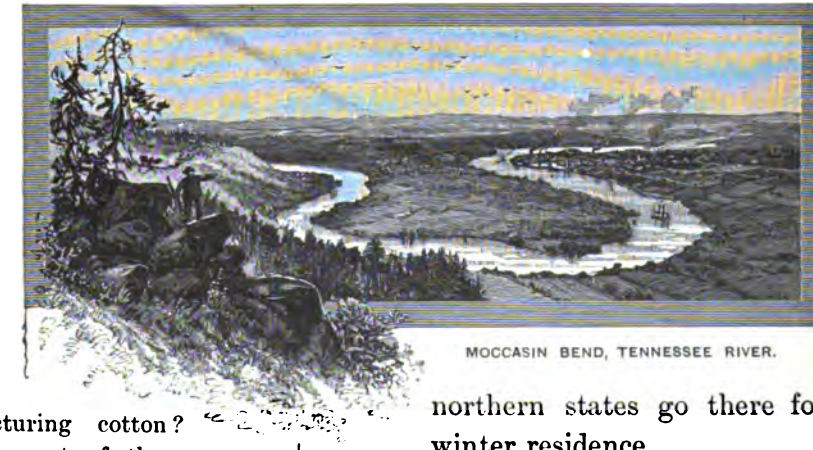
51. The Southeastern States.

Name the states of this section.

Which of these states border on the Atlantic? On the Gulf of Mexico? On the Mississippi River? Which extends farthest south? In what drainage basins are these states?

Trace on the map the Alabama River. The Tennessee River. On this page you have a picture of the Tennessee River as it flows past Chattanooga.

The climate of this section is warm and moist. In winter it is especially pleasant, and many people from the northern states go there for winter residence.



MOCCASIN BEND, TENNESSEE RIVER.

The low coast belt, which begins at New York and extends along the Atlantic Ocean and Gulf of Mexico to the Mississippi basin and beyond, is wider in this section than it is farther north. It covers all of Florida and about half of each of the other states bordering on the Atlantic and the Gulf.

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In the shallow waters along the coast there is a chain of long, low, narrow islands that have been formed by the waves of the Atlantic.

South Carolina and Georgia produce large quantities of rice.

Back of the low, swampy coast land in these states, and in North Carolina, is a strip of sandy land on which pine trees grow. From the sap of these trees pitch, turpentine, tar, and rosin are made. For what are these products used?

Still farther away from the coast is a hilly country, where corn, cotton, tobacco, and sweet potatoes are raised.

All the states of this section raise cotton. Sugar-cane is raised in the five southern states.

Alabama has coal and iron mines.

ON A FLORIDA RIVER.

In Florida there are many lakes and great cypress swamps. There are also fine groves of oranges, lemons, and bananas, and fields of pineapples.

PINEAPPLES GROWING.

Atlanta, the largest city of Georgia, is an important railroad center.

Charleston is the largest city of South Carolina. Where is it? What do you think its exports are?

Charleston and Savannah have the only good harbors on the Atlantic coast of this section. Mobile has the only one on the Gulf coast. These harbors are in river mouths.

REVIEW QUESTIONS.

Where are the Southeastern States? Name them. Name their capitals. Point out the southern end of the Appalachian Mountains.

How wide is the coast belt of this section? Are there many good harbors in this part of the United States?

What is raised along the Atlantic coast? What do we obtain from the pine trees of some of these states?

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The Werner Company

What is produced along the sides of the highlands?

What are the chief cities of this section?

52. The Southwestern States.

In this section there are three states, Louisiana, Texas, and Arkansas, and two territories, Indian Territory and Oklahoma.

Which of these states border on the Gulf of Mexico? Which on the Mississippi River? In what drainage basins are these states and territories? What large river enters the Mississippi in Arkansas? What one in Louisiana? What river separates Texas from Mexico?

A SPRING FRESHET. THE MISSISSIPPI RIVER. AT THE DOCKS, NEW ORLEANS.

The land in this section is low on the coast and near the Mississippi, but it is higher in the north and west. Northwestern Texas and Oklahoma are a high plateau.

Louisiana, like Florida, has many lakes and swamps.

How has the land about the mouth of the Mississippi been formed?

Much of this land is so low that banks called "levees" have been built along the river to keep the water from overflowing in spring. At that time of the year the snow melts in the north, and heavy rains occur, so that a greater torrent of water than usual rushes along to the Gulf. So great is the force of the water, sometimes, that it breaks through these levees and covers the fertile plantations.

The three states have the same products as the other Gulf States. What are these products?

Louisiana raises more sugar-cane and more rice than any other state.

New Orleans is the largest southern city and a very important seaport. It is the greatest cotton and sugar market in the southern states.

Arkansas has fine forests, and in the northern part of the state there are mines of coal, iron, and lead. What other southern state has no seacoast?

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TAHLEQUAH.

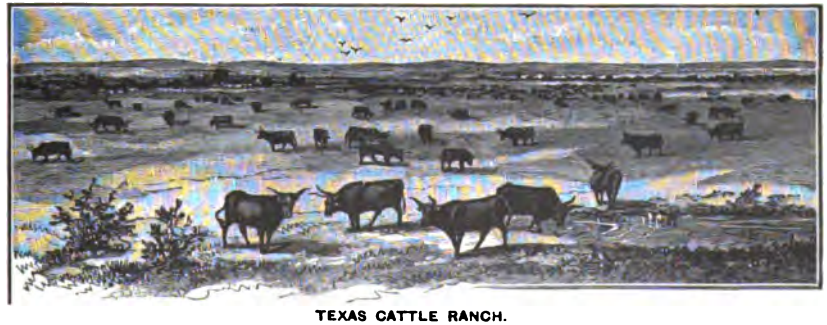
Texas is the largest of the states. On its plains great herds of cattle, horses, and sheep are raised.

These herds roam about the country and are almost wild. Twice a year the animals are driven into an enclosure called a *corral*, where, with a hot iron, the young colts and calves are given a peculiar mark that shows to whom they belong.

Indian Territory is a fertile region set apart by the United States as the home of the Indians. Some of the tribes are civilized and have cities, villages, and well cultivated farms. Other tribes are partly supported by the government.

Tahlequah is the largest town.

Oklahoma Territory was separated from Indian Territory only a few years ago. It has good farming land, and is growing rapidly in population.



TEXAS CATTLE RANCH.

REVIEW QUESTIONS.

Where are the Southwestern States? Name them. What territories are included in this section? Describe the surface of this section.

What can you say about Louisiana? New Orleans? Arkansas? Texas? Indian Territory? Oklahoma?

Name two rivers in this section. Name the capital cities of this section.

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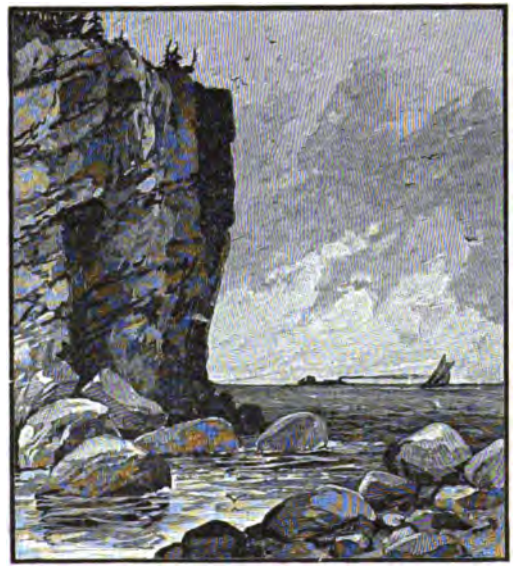
53. The Central States.

In the northern part of the Mississippi basin lie the Central States. The western portion of this group has a much severer climate than the eastern. Everywhere, except in the extreme western part, there is abundance of rain.

The surface of these states is generally level, and the soil is deep and rich. This is the chief farming region of the United States. Here is the greatest wheat-growing region of the world; and here are also vast fields of corn and oats.



PICTURED ROCKS, LAKE SUPERIOR.

Where corn is raised, hogs are kept to be fattened upon the corn. The Central States are the great pork-producing states.

The Mississippi River divides the Central States into an eastern and a western section.

54. The East Central States.

Name the states of this group.

Which of these states border on the Great Lakes? Name the Great Lakes. Which lake is wholly in the United States? Which states border on the Mississippi River? Which on the Ohio River? Which state is bordered by the Appalachian highlands?

Wisconsin produces large quantities of lumber. Its chief agricultural products are hay, oats, and corn. Milwaukee, its largest city, is a great manufacturing city, producing large amounts of clothing and machinery.

Michigan is divided by Lake Michigan into two peninsulas. The upper peninsula, next to Montana, is the greatest copper-producing region of the world. It produces more iron ore than any other state. The lower peninsula is a farming region. In its northern part lumber is cut and salt manufactured.

Illinois, Indiana, and Ohio are the great wheat and corn-producing states of this section. The largest city of the Central States is Chicago. Locate it on the map. No other city in the

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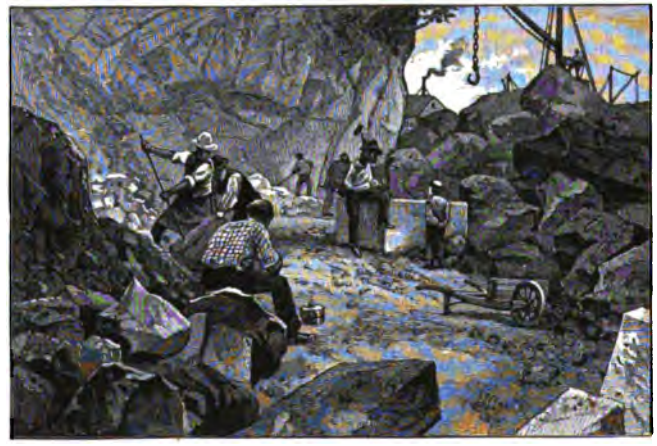
world has grown so rapidly as Chicago. Fifty years ago it was a very small town, and now it is the second city in the United States, and the greatest grain, provision, and lumber market of the world. It has more railroads than any other city in the world.

Name the lakes and rivers between Chicago and the Atlantic Ocean.

Natural gas is found in Indiana and Ohio.

Illinois and Ohio have the best coal mines of this section, although soft coal is found in all the East Central States, except Wisconsin.



STONE QUARRY.

In Ohio there are fine farms, and very many sheep are raised. Ohio was first settled by people from the New England States.

Cincinnati, Cleveland, and Indianapolis are large cities. Where is each situated?

Kentucky is a farming and grazing state, and is noted for its fine horses.

It produces nearly half the tobacco that is raised in the United States.

Louisville is a great tobacco market.

In the central part of the state is Mammoth Cave, supposed to be the largest cave in the world.

REVIEW QUESTIONS.

Where are the Central States? Why so called? Bound the Central States. What parallel separates them from the Southern States?

Describe the climate of these states. Their surface. Their soil. What is the leading occupation of the people? How do these states compare with other states in amount of wheat, corn, and oats raised? Which requires the warmer climate, wheat or corn?

Where are the East Central States? Name them. Which is the most northern of these states? The most southern? Which is the Lake State? Between which of these states does the Ohio River run?

What is said of Wisconsin? Michigan? Ohio? Illinois? Indiana? Kentucky? Chicago?

In which of the East Central States is coal found? Name the Great Lakes in order from west to east.

What is the great state of this section? The great city? Name the capitals.

Name two cities of Ohio.

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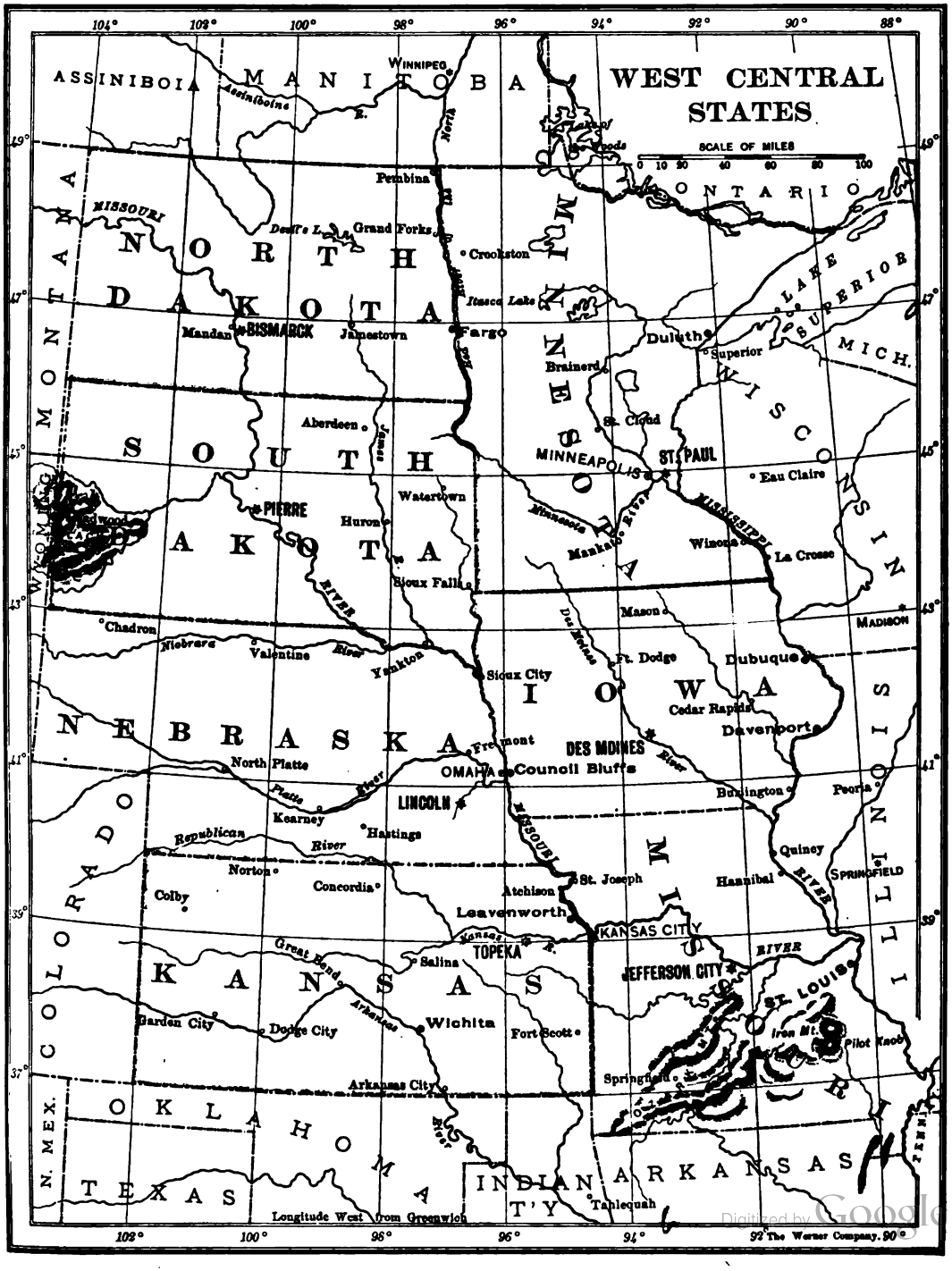

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55. The West Central States.

Name the states of this section.

Which of these states border the Mississippi River? Which border the Western States? Which are in the valley of the Missouri? Between which two states does the Missouri run? What states does it cross? How does the land in this division slope?

This is a prairie section and well suited to farming and grazing.

Minnesota contains the highest land between the Gulf of Mexico and the Arctic Ocean. Into what three river systems do its waters flow? There are thousands of beautiful little lakes in the state. In the northern part are great pine forests. What two other Central States have large forests? Minnesota is noted as a great wheat-producing state.

Minneapolis and St. Paul have the largest flour mills in the world. Where are these cities?

Iowa raises more corn than any other state.

In Missouri iron is abundant, and lead and coal are also mined.

St. Louis, situated in the center of the Mississippi basin, near where the Missouri joins the Mississippi, is a large city carrying on an extensive commerce both by water and by railroad.

North Dakota, South Dakota, Nebraska, and Kansas are all farming and stock-raising states.

If you measure a map of the United States, and draw lines through the center, east and west and north and south, you will see that these lines meet in Kansas.

REVIEW QUESTIONS.

Where are the West Central States? Name them. Name the first tier of states west of the Mississippi. The second.

Describe the surface of this region. Which

FLOUR MILLS.

is the great state of this section? The great city? Name the capitals.

What mines in Missouri?

What is said of Minnesota? Kansas? Nebraska? The Dakotas? Iowa?

56. Mountain and Plateau States.

Montana, Wyoming, Colorado, New Mexico, Idaho, and Utah are crossed by the Rocky Mountains, and together with Nevada and Arizona, whose surface is mountainous, form the group

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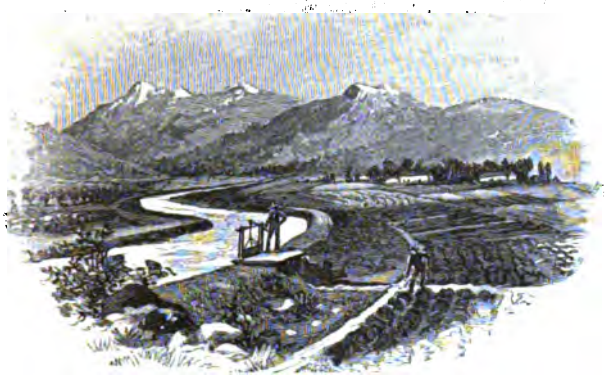

IRRIGATION SCENE.

of Mountain and Plateau States. | New Mexico and Arizona are territories.

Which are the states lying on the eastern slope of the Rocky Mountains? The climate of these states is like that of the Central States near them, though somewhat colder and drier. | Large parts of Nevada, Arizona, and New Mexico are desert land from lack of rainfall. The winds which blow from the Pacific leave their moisture on the western slope of the Sierra Nevada Mountains. Arizona and New Mexico, lying so far south, have a warm climate. Almost all their rain falls in July, August, and September.

The Plateau States north of these are much colder. Though the summers are warm, there is no other part of the United States where the winters are so severe.

All the mountain regions are too broken, rocky, and cold for cultivation, except in some narrow valleys.

ARIZONA DESERT.

This is one of the richest gold and silver regions of the world. Coal, iron, lead, borax, and salt are abundant.

Although this is the largest section of the United States, yet it has the smallest number of inhabitants.

A HERD OF CATTLE, MONTANA.

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DOMINION OF CANADA
WASHINGTON
Spokane
Kootenai
OREGON
IDAHO
MONTANA
NORTH DAKOTA
SOUTH DAKOTA
WYOMING
NEBRASKA
COLORADO
UTAH
NEVADA
ARIZONA
NEW MEXICO
CALIFORNIA
OKLA.
TEXAS
KANSAS
Helena
Butte
Livingston
Missoula
Miles
Columbia
Snake
River
Bear Lake
Great Salt Lake
Salt Lake City
Provo
Ogden
Rawlins
Rock Springs
CHEYENNE
DENVER
Colorado Springs
Pueblo
Arkansas
Trinidad
Durango
Boise
Pocatello
Winnemucca
Pyramid Lake
Virginia City
CARSON CITY
Humboldt
Sevier Lake
Grand Canyon
Las Vegas
Albuquerque
Santa Fe
Flagstaff
PHŒNIX
Gila River
Yuma
Tucson
Silver City
Los Angeles
San Diego
PACIFIC OCEAN
LOWER CALIFORNIA
GULF OF CALIFORNIA
MEXICO
Longitude West from Greenwich
SCALE OF MILES
0 50 100 150 200 250 300
MOUNTAIN AND PLATEAU STATES
119° 115° 111° 107° 103°
49° 44° 40° 36° 32°
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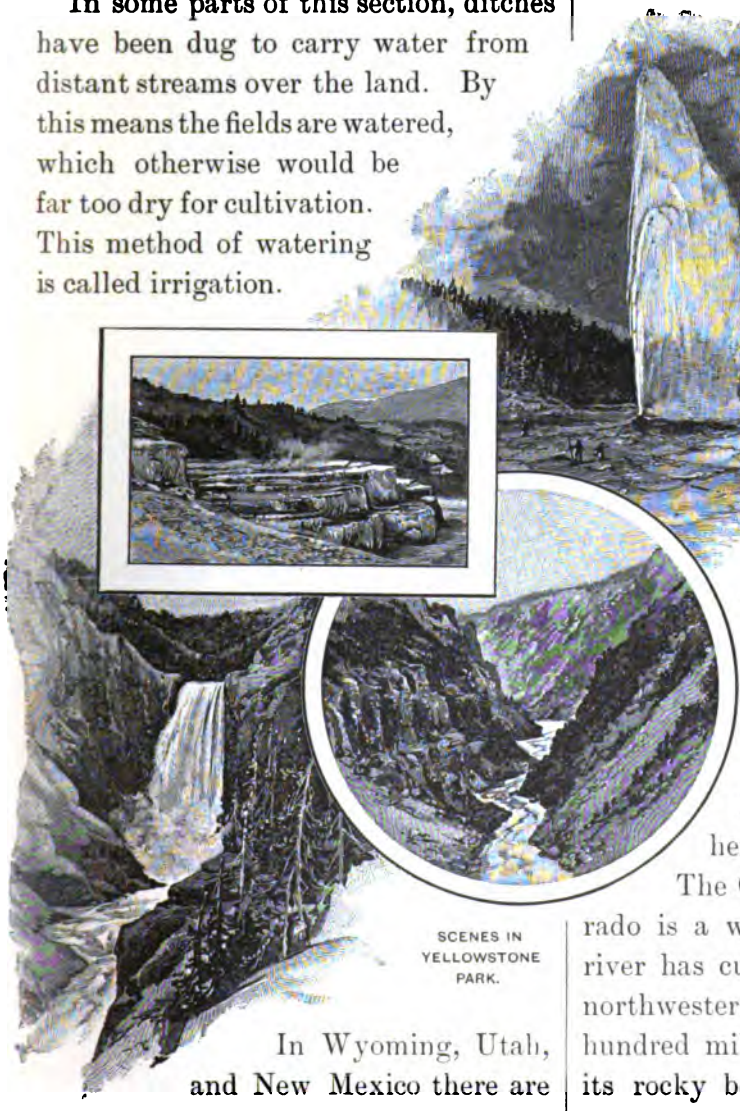
The people are miners, stock-raisers, or farmers.

In some parts of this section, ditches have been dug to carry water from distant streams over the land. By this means the fields are watered, which otherwise would be far too dry for cultivation. This method of watering is called irrigation.



SCENES IN YELLOWSTONE PARK.

In Wyoming, Utah, and New Mexico there are more farmers and stock-raisers than there are miners, but in the other states there are more miners.

Wyoming contains the Yellowstone National Park. This magnificent park is a mountainous region in the basin of the Yellowstone River, a tributary of the Missouri. It has many natural wonders. Here are numerous boiling springs, and geysers, gurgling, steaming, roaring, and exploding at intervals. Here, too, are grand waterfalls, deep gorges or canyons, beautiful lakes, and lofty mountain peaks.

Near the center of Colorado are some of the highest peaks of the Rocky Mountains, and the scenery here is very grand.

The Grand Canyon of the Colorado is a wonderful gorge which the river has cut through the plateau of northwestern Arizona. Here for two hundred miles the river dashes along its rocky bed, and on either side of the stream rise walls of rock, sometimes six thousand feet high, curiously carved by the action of the water.

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SCENE IN THE GARDEN OF THE GODS.

Denver is the largest city in this section and the capital of Colorado.

Not very far from Denver is a spot called the Garden of the Gods, where red rocks tower in spires and curious shapes.

GRAND CANYON OF THE COLORADO.

Many of the people in New Mexico speak the Spanish language. They are descendants of the native Indians and of the Spaniards who first settled this part of the country.

Utah has more inhabitants than any other state of this division except Colorado. In Utah is Great Salt Lake, a gallon of whose water

EXCELSIOR GEYSER.

contains about a quart of salt. Another lake in this state contains so much alkali that its water resembles very strong soap-suds.

Near Great Salt Lake is Salt Lake City. Most of the people of this city are Mormons, or Latter-Day Saints as they call themselves. They have an imposing temple, a large tabernacle, and fine school buildings.

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REVIEW QUESTIONS.

Where are the Western States? Which lie mainly on the eastern slope of the Rocky Mountains? Which are crossed by the Rocky Mountains? Which lie in the plateau west of the Rocky Mountains? Which border the Pacific Ocean?

Which of these states are arid (very dry)? Why? Which are warm states? Which are cold?

Which are the stock-raising and agricultural states? Which are the mining states?

Which is the great state of this section? The great city? What is the capital of each state? What is said of Wyoming? Colorado? New Mexico? Utah? Nevada? Arizona?

57. The Pacific States.

Within these states are three ranges of mountains: the Cascade Range in Washington and Oregon, the Sierra Nevada in California, and the Coast Range lying farther west. The valleys between these ranges, reaching from Mexico to Canada, are sheltered from chilling winds and have a delightful climate and productive soil.

SALT LAKE CITY. TEMPLE BLOCK, SALT LAKE CITY. GREAT SALT LAKE.

Southern California is very dry; but the amount of rainfall increases regularly northward to Washington, where it is very great.

This is one of the favored regions of the world, for the soil is very fertile. In Washington and Oregon there are immense forests of pine and fir, and vast cattle and sheep ranches. In California there are grain fields, vineyards, orange groves, and fruit orchards producing great quantities of peaches, prunes, plums, and other fruits. In Southern California flowers bloom in the open air in all seasons of the year.

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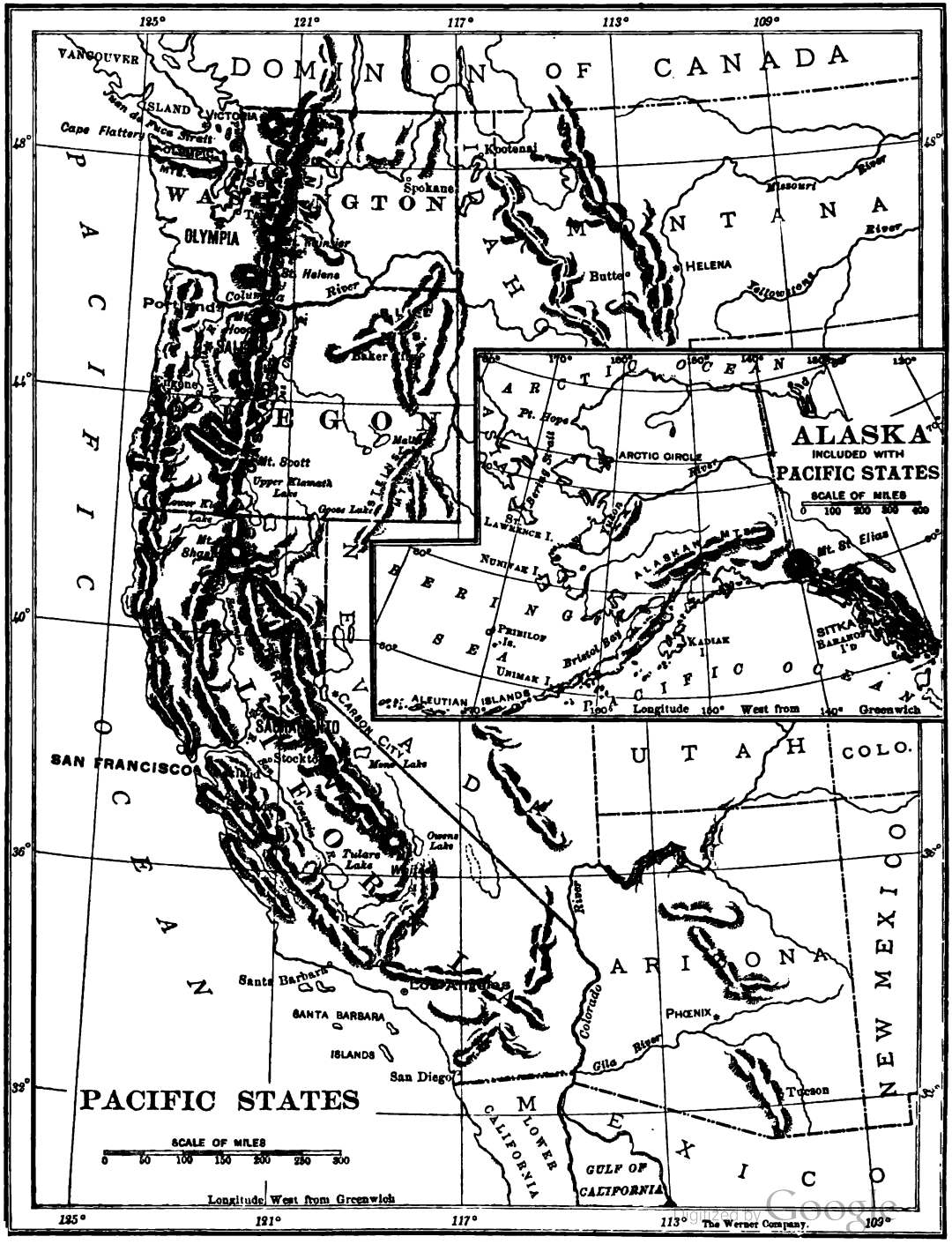

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What rivers drain these valleys? In what part of the state is the drainage to lakes without outlets? The largest river is the Columbia, which has its head waters in the Rocky Mountains and breaks through the Coast and Cascade Ranges to reach the ocean. On this river are very valuable salmon fisheries and canneries.

Puget Sound is the center of a great trade in lumber. The lumber mills here are the largest in the world.

Gold was discovered in California in 1848. How many years ago was that? Before that time there were only Indians and a few Spanish and Mexican settlers in California, but within two years after the discovery of gold 100,000

MOUNT RAINIER, WASHINGTON.

people had gone there from other parts of the United States and even from South America, Europe, and Asia. Now California is the most populous state west of the Rocky Mountains.

CALIFORNIA TREES.

At first the land seemed fit only for grazing, and it was thought that farming could not succeed because of the lack of rain during the summer. But farmers learned that by plowing the land in the spring and sowing the seed after the first fall rains, an abundant harvest could be raised. Now almost as much wheat is raised in California as in any other state. Which are the great wheat-growing states? Many farmers irrigate their land.

No other part of the world produces such a variety of fruit as grows in California.

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The peaches, pears, grapes, figs, plums, cherries, nectarines, apricots, oranges, lemons, olives, which grow there are sent to the eastern cities. There are factories for drying and canning the fruit. The grapes are made into wine and into raisins.

There are large trees in California, some of them from 200 to 275 feet high.

San Francisco, on San Francisco Bay, has the best harbor of the Pacific coast, and it has, therefore, a large foreign commerce. To what countries can vessels go from there?

CALIFORNIA FRUIT FARM.

REVIEW QUESTIONS.

Where are the Pacific States? Name them. In what latitude are they? Which is the most important state? The most important city? What is the capital of each state?

What mountain ranges are there in these states? What important river valleys? In what respects are these valleys favored regions? What rivers flow through them? What valuable products have they?

What is the great river of the Pacific coast? What fisheries has it? What arms of the Pacific on this coast? What can you say of Puget Sound?

What of the climate of the Pacific coast? What can you say of gold in California? Farming? Fruit-raising?

58. Alaska.

Alaska is the peninsula in the northwestern part of North America.

This territory is more than seventy times larger than Massachusetts, but there are seventy times as many people in Massachusetts as in Alaska.

Along the southern coast, between the ocean and the coast range, the climate is mild. Southern Alaska is warmer in winter than Illinois or New York. In other portions of Alaska the winters are extremely cold.

The Yukon River is one of the largest rivers of the world. Mount Saint Elias is one of the highest mountains in North America.

Gold and silver are found in Alaska. The most valuable product of this region is the fur of the seal. Whales are caught in Bering Sea.

Thousands of seals live together in rookeries which they themselves divide into sections, one for the mothers and their puppies, another for the rest of the seals, while there is a hospital section for the sick seals, or those hurt in the fights constantly going on among the older ones. In winter the seals go farther south, but late in the spring they all return. The best skins come from the seals that are between two and five years old. The skins, after be-

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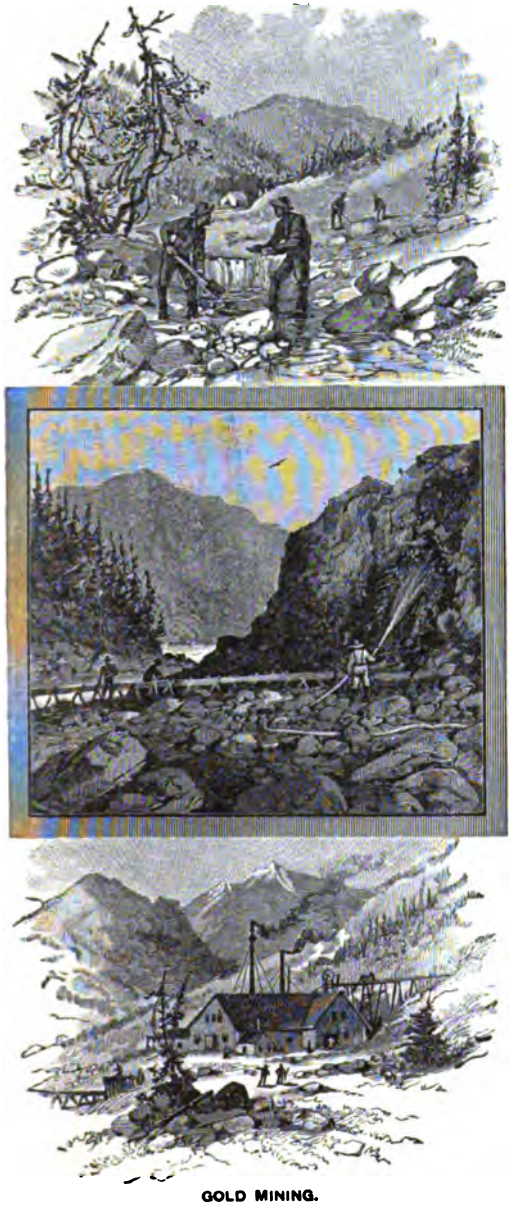
ing removed, are salted, dried, and taken to San Francisco, and from there sent to London to be dyed, finished, and sold.



GOLD MINING.

Where is Alaska? What is its climate? Chief river? Its most valuable product?

REVIEW QUESTIONS.

Which are the lumbering regions of the United States? Which are the wheat regions? The corn? Cotton? Sugar? Rice? Where are some of the coal mines? The iron? Gold? Silver? Lead? Copper? Which are the main fishing regions? Which are the sheep-raising sections? Where do oranges grow? Small fruit?

Which is the most important of the New England States? Middle Atlantic States? East Central? West Central? Southeastern States? Southwestern States? Mountain States? Pacific States?

What is the chief city of the New England States? Middle Atlantic? East Central? West Central? Southeastern? Southwestern? Mountain? Pacific? Locate each of these cities.

59. British America.

After Columbus had made his first voyage to America, an English merchant, named Cabot, sailed along the eastern coast of North America and claimed all that region for England. Then came the French, who settled along the St. Lawrence River and the Great Lakes. After one hundred and fifty years they were obliged to give up this land to the English. Most of the people in the country along the St. Lawrence River are the descendants

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of these French settlers, and they still speak the French language.

All of this large tract of country north of the United States, except the peninsula of Alaska, is called British America. It is larger than the United States without Alaska, but it has only about one-thirteenth as many people, for much of the land is too cold to be inhabited. The state of New York

WINTER SPORTS IN CANADA.

alone contains more people than all British America. British America consists of the Dominion of Canada and the colony of Newfoundland.

Most of Canada is a rolling plain. What high mountains cross the western part? There are many large rivers in Canada, but some of them are of little use, because the country through which they flow is so cold that they are frozen over for a good part of the year.

There are many hunters who roam over this cold region in search of the otter, mink, beaver, and other animals whose fur is so valuable.

West of the Rocky Mountains there are large coal fields and valuable gold mines. Coal and iron are also found in the far east on the peninsula of Nova Scotia.

Many of the people along the east coast and on the Great Lakes are fishermen; farther away from the coast they are engaged in lumbering and farming. Although Canada is so cold that even in the southern part snow sometimes covers the ground for six months of the year, yet the summers are usually long enough in the St. Lawrence basin and the southwestern part of the Hudson Bay basin to ripen corn, wheat, potatoes, oats, barley, rye, the grasses, and hardier fruits. The soil there is fertile, and the farmers are very industrious.

Each of the two chief provinces of Canada, — Quebec and Ontario, — desired to have the capital of the Dominion in its own territory, and when the Queen of England was asked to decide the question, she chose a spot on the boundary between the two provinces, and thus Ottawa became the capital.

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MONTREAL.

Montreal is the most important city of Canada. Ocean steamers ascend the river as far as this city.

The steamers from the lakes on the return trip avoid the rapids of the St. Lawrence by passing through a canal that has been built around them.

The island of Newfoundland is cold and foggy on the coast, but in the interior it is more pleasant. The wealth of this island consists in its cod and herring fisheries.

REVIEW QUESTIONS.

Where is British America? What is the greater part of it called?

How does the Dominion of Canada compare with the United States in size? In population? What part of the inhabitants of Canada are French? Which are the two leading provinces? What is the capital? Describe the climate.

Is Canada a good agricultural country? What are raised? What parts of the country are best for agricultural purposes? What is said of the forests? The fisheries?

Where is coal found?

Describe Newfoundland. What fish are caught there?

60. The Polar Regions.

As one approaches the north polar regions by way of the Atlantic Ocean, he meets fragments of ice borne southward by the current. Huge masses of ice, weighing perhaps millions of tons, floating in the ocean, are called icebergs. Great icebergs are continu-

LACHINE RAPIDS, ST. LAWRENCE.

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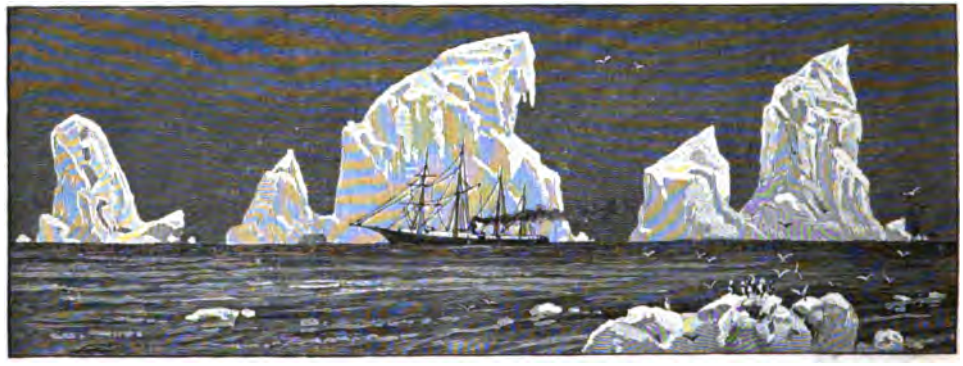
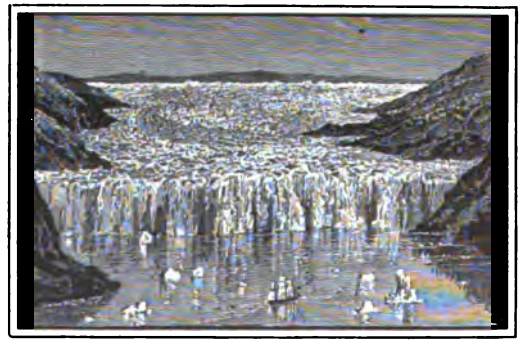
ally breaking off from the wonderful ice rivers that are found on the western coast of Greenland. Usually they float as far south as the Banks of Newfoundland before they melt, and often they get into the way of ships crossing the Atlantic.



ICEBERGS.

Do you know how these ice rivers are made? The sun's rays partly melt the snow on the mountain summits into a granular mass. This descends to the valleys, and is there changed by the intense cold into a solid mass of ice, called a glacier. The great weight of snow behind it constantly forces the glacier onward toward the coast, till at last it pours its immense mass into the sea. The water hollows it out underneath, and, finally, a portion suddenly breaks away from the main mass, and this iceberg is carried southward by the great Arctic current.



A GLACIER.

Within the Arctic region are many large islands. Greenland is the largest island in the world. To what country in Europe have you learned that it belongs?

In the southwestern part of this island, the shores are covered with vegetation. The interior is covered by a sheet of ice, sometimes called the "ice-cap." The only settlements of the island are near the coasts.

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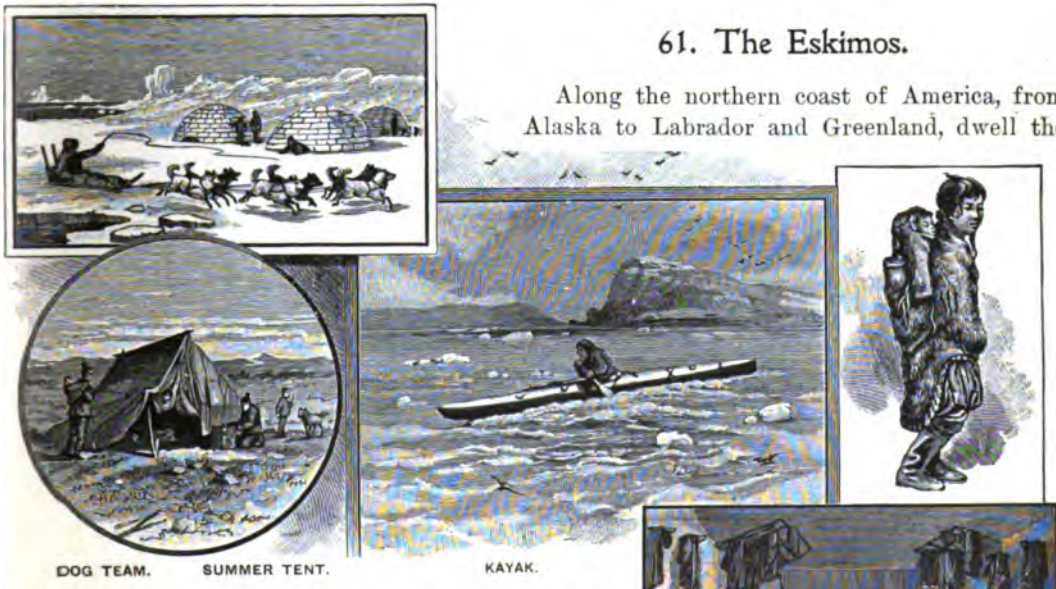
The first white man who visited Greenland called it by this name in order to attract settlers. Baffin, the discoverer of Baffin Bay, called it the Land of Desolation.

It is usually thought that the polar regions are always covered with snow; but every summer the snow disappears on the western coasts of Greenland. In April the rocks appear; in May the flats are bare; and in June extensive meadows yield forage for herds of reindeer and musk-oxen.

Flowers are so numerous that in some spots the ground is yellow, or blue, or carmine, or white, with the bright flowers. Swarms of mosquitoes appear in the evenings.

61. The Eskimos.

Along the northern coast of America, from Alaska to Labrador and Greenland, dwell the



DOG TEAM. SUMMER TENT. KAYAK.

ESKIMO MOTHER AND CHILD.

INTERIOR OF IGLOO.

Eskimos. Their name is a corruption of an Indian name meaning raw-flesh-eater.

The Eskimos are broad-shouldered, and those in northwestern British America are very short in stature. Those in northern Alaska are quite tall, most of them being about six feet in height. They have round, swarthy faces, small, twinkling eyes, small, flat noses, thick lips, and straight, coarse hair.

The men and women dress much alike, in hooded jackets, trousers, and boots made of deer skins or furs neatly sewed together with thread made of sinew. The skins are prepared for sewing by being chewed soft by the women. In the warm fur hood of the mother the baby is carried about, or it is left sleeping in the hut in a bag of feathers.

Their hut, or *igloo*, is built of stones, and to enter it one must crawl on hands and knees through a tunnel-like passage. In the very far north these igloos are built of blocks of snow or ice. Sometimes they are made by covering a framework of whale's bones with earth.

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Most igloos have only one room, and that is not furnished like any room in your house. Around the sides of the hut extends a broad seat which serves as table, chairs, and beds for the whole family, and is the favorite spot for numerous small dogs as well.

This seat is covered with warm skins, but if you should look under them you would see blocks of hard, frozen snow or ice.

All the light in this igloo, and all the fire for cooking or for warmth, comes from a soapstone lamp. This lamp is shaped like a deep platter, and is full of oil made from the fat or blubber. Many wicks made of moss float in the oil, and over the lamp hangs a cooking-pot.

The dishes and the weapons made by the Eskimos are either of bone or of soapstone. Soapstone when first taken from the quarry is soft and easily worked, but it quickly hardens upon exposure to air or heat.

What have you learned about the summer months in the Arctic regions? When warm weather comes, the walls of the igloos begin to drip, and the Eskimos leave them for tents covered with skins.

The Eskimos seldom eat anything but animal food. From the sea they get many kinds of fish, and also whales, seals, walruses, narwhals, while on the land they hunt reindeer, hares, foxes, and occasionally a bear or wolf. In summer many birds such as ducks, petrels, and others that live on fish, fly north to the polar regions.

Sometimes the Eskimos partly dry the flesh of the sea animals for winter use, occasionally they roast it without salt, but much of it they eat raw. The little Eskimo children eat a piece of raw seal or of blubber as eagerly as you eat candy.

No horse could live in this cold country, and so the natives use dogs instead. Many dogs are fastened together by straps and taught to draw the sledges of the Eskimos. The dog which runs alone at the head of the line is called the leader, and he is always a very clever animal.

The long narrow canoe, or *kayak*, of the Eskimos is very light and strong. Its framework is of bone or wood covered tightly with sealskins, and sealskins are also sewed over the top so that it is wholly water-tight.

REVIEW QUESTIONS.

What is a glacier? How is a glacier formed? What are icebergs? How are they made?

What island northeast of North America belongs to Denmark?

Describe Greenland. Why has it not many rivers?

Where do the Eskimos live? Describe their figures and their faces. How do they dress? Describe their huts. Do they have summer houses? What furniture have their igloos? What do the people eat? How do they travel? Describe their boats.

62. Mexico and Central America.

Within the torrid zone lie Central America, the West Indies, and the southern half of Mexico. These countries are called Spanish America because they were settled by Spaniards, and the people still speak the Spanish language.

A few years after the voyage of Columbus, a Spaniard named Cortez reached the coast of Mexico, near where its chief seaport, Veracruz, now stands. He waged severe

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and cruel wars with the natives, and conquered the country for Spain. It remained in the power of Spain for 300 years. Since 1822 it has been an independent country. In wealth and population it ranks second only to the United States among the North American countries.

Mexico lies between the United States and Central America, and extends from the Gulf of Mexico to the Pacific Ocean. Without the long, narrow peninsula of Lower California on the west, Mexico is like a cornucopia in shape. What peninsula is there on the southeast?

MEXICAN PACK TEAM.

Along the coasts of Mexico there are narrow, marshy plains. The center is a high plateau. The sides of this plateau are bordered by mountain ranges which gradually increase in height as they extend southward. The highest peaks of these mountains are *volcanoes*[1] that have frequent eruptions.

[1] Volcanoes are mountains from which melted matter, steam, smoke, gases, etc., are thrown out. The throwing out of these substances is called an eruption.

Mexico, like all countries in the torrid zone, has a wet and a dry season; but its plateau is so high that it has not the heat of that zone. The low coast plain is hot and unhealthful, but the plateau has the mild, healthful climate of temperate regions, while the high mountains are extremely cold. The vegetation and the products vary from those of the torrid zone to those of the frigid zone.

The winds here are mainly from the west, and they bear along clouds heavily laden with moisture from the Pacific Ocean.

What effect on these clouds does their striking the cold highlands produce?

On which side of the mountains does most of the rain fall? Is the interior plain moist or dry?

Are the moist winds from the Gulf of Mexico affected in the same way?

Do you see why the coasts are warm and moist, the interior cold and dry?

In what part of Mexico does the greater portion of its population live?

Why do the people prefer to live there?

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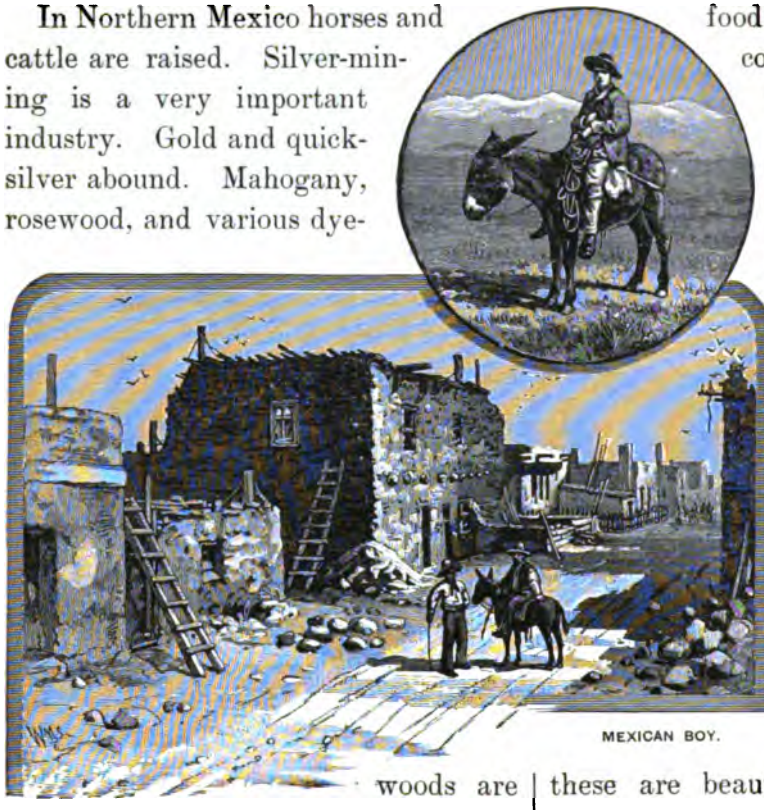
In Northern Mexico horses and cattle are raised. Silver-mining is a very important industry. Gold and quicksilver abound. Mahogany, rosewood, and various dye-woods are found in the forests of the lowlands, and all the products of the Gulf States are raised. What are these products? We receive cocoa from Mexico, and also the vanilla-beans from which vanilla extract is made.



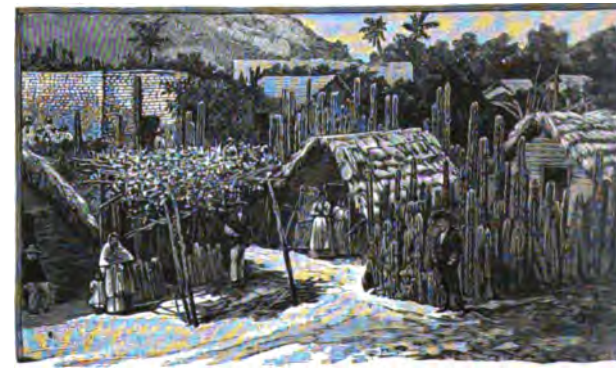
MEXICAN BOY.

MEXICAN ADOBE HOUSES.

The greater part of the people of Mexico are Indians and half-breeds.[1] Their chief food is corn cake, and beans cooked with red pepper. They live in adobe houses; that is, houses made of bricks dried in the sun and not burnt like our bricks.

The City of Mexico, the capital of Mexico, is in a beautiful valley several thousand feet above the sea. Most of its houses are flat-roofed, one-story stone buildings. Gardens and orange groves surround the city, while beyond these are beautiful lakes, and still farther away the snow-crowned mountains.

Veracruz, on the Gulf, has a large



MEXICAN VILLAGE, SHOWING CACTUS FENCES.

[1] Half-breeds, people of white and Indian blood.

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LAKE NICARAGUA. GUATEMALA. NATIVE CABIN.

commerce. Is its climate a healthful or pleasant one?

Central America. — Central America extends from Mexico to the Isthmus of Panama, and consists of several republics and one British colony. A railroad crosses the Isthmus of Panama. A canal is planned through which the largest ships may pass from the Caribbean Sea to the Pacific Ocean. Lake Nicaragua is to be made a part of this canal.

The relief, products, and people of Central America are similar to those of Mexico. What can you tell about them?

There are many volcanoes in this region.

63. West Indies.

On his first voyage to the New World Columbus explored several of the islands lying southeast of the United States, between North America and South America. He took back to Spain some of the people whom he found there. The people he called Indians. The islands were called West Indies. From page 64 you can learn why these names were given to these islands and the people.

There are about one thousand of these islands, some of them rugged and mountainous, others low coral reefs. What have you learned about coral islands?

The products of these islands are like those of Mexico, — valuable woods, tropical fruits, sugar, coffee, spices, and tobacco.

Cuba is the largest island and its capital, Habana, is the greatest sugar market of the world.

The race of Indians which Columbus found there has nearly disappeared, and now the people are descendants of Spaniards and negroes.

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MORRO CASTLE, CUBA.

HABANA.

STREET SCENE, HABANA.

REVIEW QUESTIONS.

Where is Mexico? What is its relief? Describe its climate.

If a traveler should pass from the coast to the inland plateau, what changes in climate would he find? If one should climb the mountains, what change in climate would he experience?

Where are Mexico's two peninsulas? What are the products of the low coast lands? What mines in the mountains?

Describe the City of Mexico. Point out the two seaports of Mexico. How do you account for there being no navigable rivers in Mexico? Does Mexico have much commerce?

Where is Central America? Is this a country or a group of countries?

What is its relief? What are its products?

Where are the West Indies? What is said of their climate? What sea lies between them and Central and South America? What are their products? Which is the largest of these islands? For what is Habana noted?

How did the West Indies receive their name?

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RELIEF MAP OF SOUTH AMERICA.

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SOUTH AMERICA.

64. Position and Form.

In what direction from North America is South America? In what zones does it lie?

What large city is near the Tropic of Capricorn?

In what latitude is the mouth of the Amazon River?

What are the waters which bound South America?

South America is very simple in form, and its coast line is not much broken. In this respect it resembles the other southern continents, and is very different from the northern continents, which have coasts broken by many projections and indentations.

Which continents have peninsulas? Which have not? Which are northern continents? Which are southern continents?

South America becomes narrower as it extends southward. Only a small portion of it is in the south temperate zone. Compare it with North America.

65. Relief.

You notice that the western highlands of South America and those of North America form one long chain along the Pacific coast. The eastern highlands of South America are in two divisions, one north, the other south, of the Amazon, and are broad plateaus crossed by ranges of moderate height. The northern is called the Highlands of Guiana; the southern, the Highlands of Brazil.

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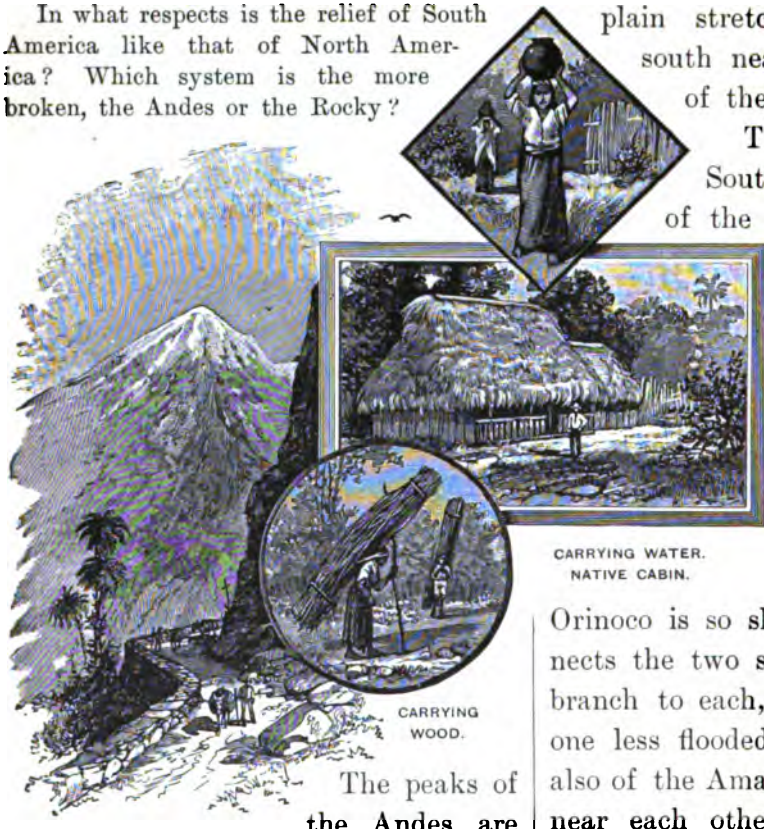
In what respects is the relief of South America like that of North America? Which system is the more broken, the Andes or the Rocky?



CARRYING WATER.
NATIVE CABIN.

CARRYING WOOD.

A ROAD IN THE ANDES.

The peaks of the Andes are higher than those of the Rocky Mountains, but the plateaus upon which they rest are narrower.

The Andes affect very greatly the climate of South America. They shut off the winds which blow from the Pacific, while the greater part of the continent is open to the winds from the Atlantic and the Caribbean Sea.

In South America, as in North America, there is a great lowland plain stretching from north to south nearly the entire length of the continent.

The river systems of South America are those of the Orinoco, the Amazon, and La Plata.

These three systems are separated only by low divides, as are some of the systems in North America. Indeed, the watershed between the Amazon and the Orinoco is so slight that a river connects the two systems, sending off a branch to each, and flowing into the one less flooded. Certain tributaries also of the Amazon and La Plata rise near each other; so that, by being carried a short distance, a canoe can pass from one system to the other.

Are there any large rivers flowing westward in South America? Are there any in North America?

Name the three principal river systems of South America. Trace the basin of each. Is it easy to find the divides between them? What does this show as to the surface of South America?

The great central plain of South America is divided into three sections having different names and different

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products. In the north are the llanos, or plains of the Orinoco, extending from the highlands of Guiana to the foot of the Andes. These are low plains, marshy in the wet season, and producing grasses in abundance, but bearing few trees.

SELVAS.

LLANOS.

The selvas cover a large part of the basin of the Amazon. The word *selvas* means forests, and tells the nature of this region.

Southwest of the plateau of Brazil are the pampas. These are rolling plains covered with grass, somewhat like our prairies. They afford fine pasturage for cattle, horses, and sheep.

The Amazon River system is the largest in the world. The river and all its tributaries are entirely within the tropics. Towards its mouth the Amazon is many miles wide and contains numerous low islands. Sailing up the river we pass rubber trees, with gray trunks and shining green leaves, from which our india-rubber comes, cacao trees from whose seeds chocolate is made, and immense trees which yield valuable dyewoods and gums. Farther away from the banks we see mahogany trees, forty feet high perhaps, and four or five feet in diameter.

These forests are the densest in the world. The trees are so interlaced with climbing plants that the forests in some parts are impassable. Gay-colored parrots, chattering monkeys, fierce wild beasts, and poisonous reptiles make their home there. During the rainy season the river overflows and covers a large extent of land.

PAMPAS.

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66. History.

When the Spaniards discovered the New World, they came first to the West Indies, then along the Gulf coast to the mainland of Mexico. Afterward they conquered the Pacific coast of South America and the valley of La Plata. At the present day the greater part of the people of South America, except in Brazil, are

MONKEYS.

the descendants of these Spaniards, of the native Indians of the continent, and of the Africans who were imported as slaves.

The wild Indians are now found only in the vast interior forests.

67. Animals.

South America has many animals that are common in tropical America, but unknown in the temperate regions of the United States and Canada.

In all parts of the torrid zone monkeys are found, but some of those in South America differ from any in the Old World.

TAPIRS.

Their tails are almost as serviceable to them as arms or legs, for these tails are so long and strong that the monkeys can twist them around a branch of a tree, and thus suspend themselves.

The tapir is an animal living in the dense forests of South America and Central America.

Its hide is very thick and tough. This hide when tanned is almost white, and it makes the finest of leather where great strength is required. In Brazil it is made into halters and lariats.[1]

Tapirs live upon fruits and leaves. Their chief enemy is the jaguar, one of the strongest and fiercest of wild animals. It has a fine and handsomely spotted fur.

JAGUAR.

[1] Lariats, long thin ropes used in catching cattle and horses.

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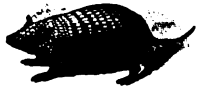
The puma is another fierce animal found throughout South America.

PUMA.

The armadillo is a small quadruped having a bony case covering all its body. Its head, legs, and tail are protected by bony plates.

It has feet well fitted for burrowing, and when pursued it can quickly bury itself in the ground. Should you be invited to a fine dinner in South America, perhaps you would be served with roasted armadillo.



ARMADILLO.

This curious-looking animal is the ant-bear, which feeds upon ants and the insects found in the bark of trees. It has a very long, red tongue that resembles a huge earthworm.

ANT-BEAR.

BOA-CONSTRICTOR.

The skin of the boa-constrictor is used in making boots and saddles. Anacondas are large snakes; some of them are thirty feet long.

These serpents are not poisonous, but they kill their prey by winding themselves about it and squeezing it to death. Their jaws and skin have such a wonderful power of expansion, that they often devour animals much larger than themselves, and then lie stupid and sleepy for a long time afterwards.

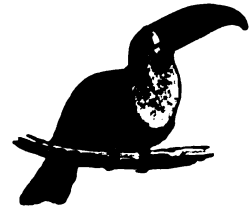
CONDOR

PARROT.

The largest flying-bird is the condor, found only in the Andes Mountains. Its body is about four feet long, and when its wings are outstretched they measure nine or ten feet from tip to tip.

Measure off ten feet upon the schoolroom floor to see how large some of these birds are. The condor feeds upon living or dead animals, and is so powerful that it can carry off sheep and calves. Shepherd dogs are trained to bark whenever one appears in the air.

HUMMING-BIRD.



TOUCAN

The forests of Brazil are full of beautiful humming-birds and parrots.

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The toucan is a peculiar-looking bird, having an enormous beak.

The penguin is a web-footed swimming-bird found only south of the equator. Its wings have only one movable joint, that at the shoulder. They are useless for flight, but make good paddles.

PENGU.N.

On land the penguin sits upright. It also walks and runs erect except when frightened; then it drops forward, and, using its wings as forelegs, makes great speed. During the hatching season vast numbers, flocks of thirty or forty thousand, live together in rookeries, choosing for these the most desolate islands.

Among the domestic animals the llama is very useful. It has long woolly hair, and somewhat resembles a sheep, although it is much larger.

The llama is used as a beast of burden in the Andes, its small hoofs especially fitting it for mountain climbing. It belongs to the camel family, and like the camel it has a stomach so arranged that it can drink sufficient water at one time to supply it for a long journey.

LLAMA.

The American ostrich is smaller than the ostrich of the Old World. Its plumes are not ornamental, and are therefore useful only for feather dusters.

68. Countries and Products.

South America is divided into ten republics and three small possessions of Great Britain, The Netherlands, and France.

The language spoken by the greater part of the people of South America is Spanish. In Brazil, Portuguese, the language of its first settlers, is used.

The people of the countries which occupy the plains of South America are chiefly engaged in agriculture and stock-raising.

In the Andes Mountains are rich mines of silver, copper, mercury (quicksilver), and gold. These mines have been worked for more than three hundred years.

Quinine is made from the bark of trees which grow in Peru and Bolivia.

From the shores of small islands off the coast of Peru, guano, a valuable fertilizer, is collected and sent to our country and to Europe.

The most important countries of South America are Brazil, Argentina, and Chile.

Brazil is the largest country of South America. It is nearly as large as the United States.

One-half of all the coffee used in the world is raised in Brazil. Sugar-

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cane, cotton, vanilla, cacao, rice, and the banana are also cultivated. Nuts and other fruits abound.

Nearly all our india-rubber comes from Brazil. What articles are manufactured from india-rubber? Brazil has mines of diamonds, iron, and salt.

RUBBER TREES, BRAZIL.

The capital of Brazil is Rio Janeiro, the second city of South America. Where is it situated?

Argentina is about one-third the size of the United States. Its climate and products resemble those of our country. It exports great quantities of hides, horns, and wool, wheat and corn.

Buenos Ayres, its capital, is the largest city of the world south of the equator.

Chile is the best governed country of South America, and its people are the most industrious and prosperous. They are engaged in mining, in cultivating wheat, corn, and fruits, and in rearing herds of horses and cattle. Valparaiso is a flourishing seaport. Santiago, a large city in the center of Chile, is its capital.

COFFEE PLANTATION, BRAZIL.

Chile is as long from north to south as the United States is from east to west.

Valparaiso and Buenos Ayres are connected by a railroad. Why is this road important?

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REVIEW QUESTIONS.

Where is South America? Where is it widest? Is it as long as North America? Describe the relief of South America. How do the Andes Mountains differ from the Rocky Mountains?

Into what sections is the great central plain of South America divided? Describe each section.

What would you see in a voyage up the Amazon? Up the Mississippi?

How do the Andes Mountains affect the climate of South America?

In what part of South America is Spanish spoken? Did the Spaniards enter South America first from the east or from the west? In what country is Portuguese spoken? How large is Brazil? What does it export?

Where in South America is stock-raising extensively carried on?

What countries of South America export quinine? Whence do we get most of our coffee? India-rubber?

What is the capital of Brazil? Where is it situated? What city near the mouth of the Amazon? Is the Amazon of as much service as the Mississippi to commerce? Why?

What can you say of Chile? Where is guano found?

What animals of South America can you name? Describe those you name.

INDIAN FAMILY, ARGENTINA.

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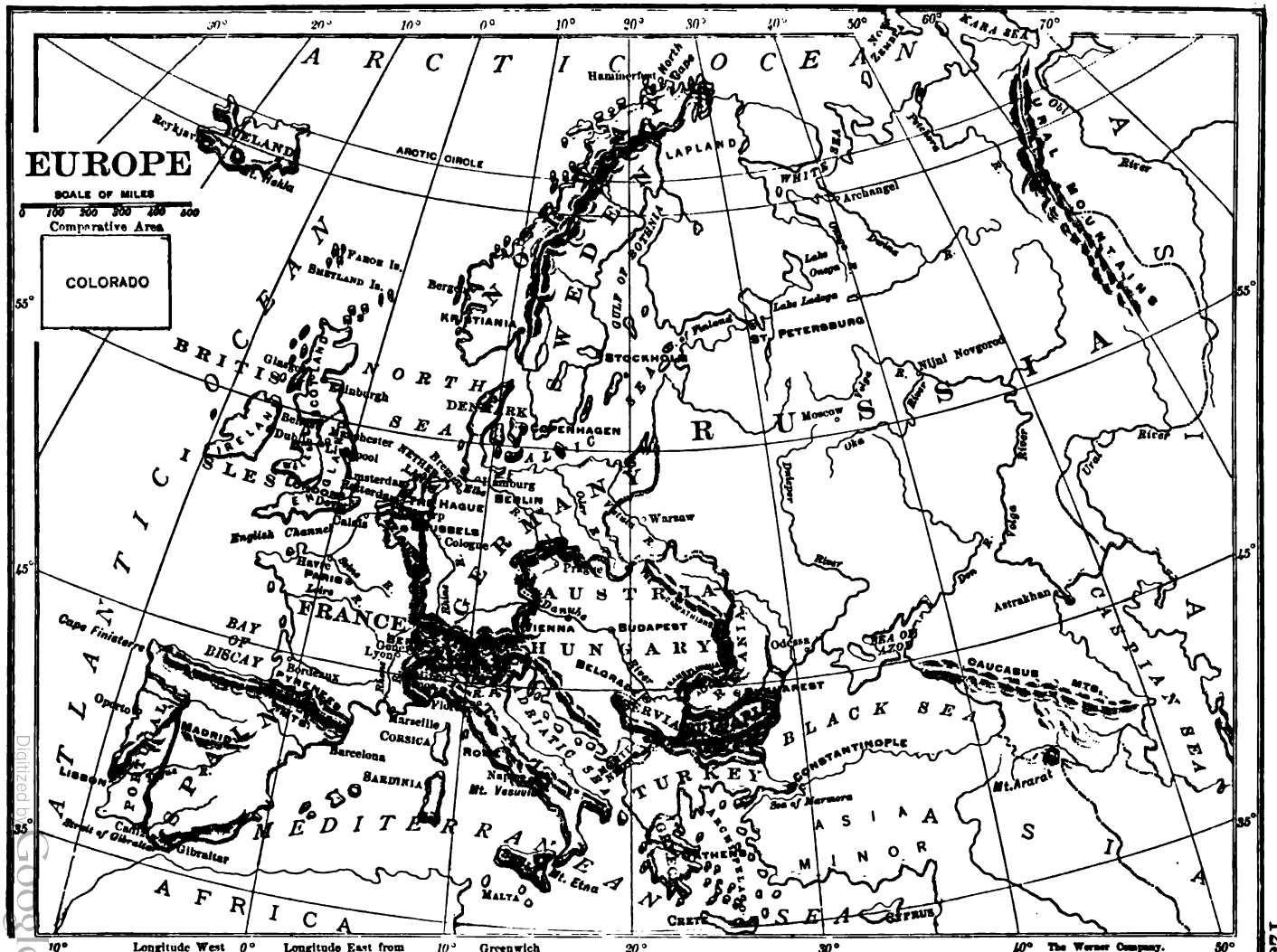

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RELIEF MAP OF EUROPE.

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EUROPE.

69. Position and Relief.

What are the three divisions of the eastern continent? Which is the smallest? What form the boundary line between Europe and Asia?

Look at the map of Europe and see how very irregular its coast line is. Has any other continent so many bays, gulfs, and seas? The Baltic and the Mediterranean Seas, which are but arms of the Atlantic Ocean, extend into the land so far that they seem like inland seas.

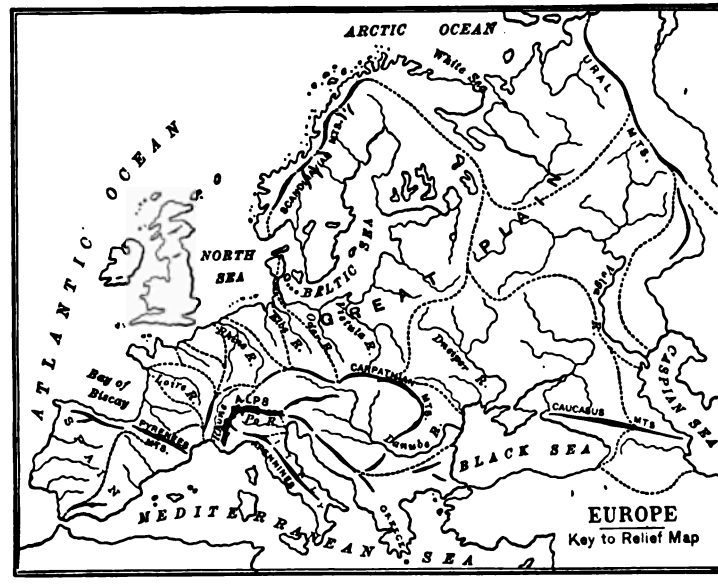
In Europe the Alps with their extensions eastward and westward form the chief mountain system. Other mountain systems are the Scandinavian Mountains and the Ural Mountains running nearly at right angles to the Alps.

North of the Alps is a great plain stretching to the North Sea, the Baltic Sea, and the Arctic Ocean.

Name the three southern peninsulas of Europe.

There are three important rivers that rise near one another in the Alps. One, the Danube, is long, flows toward the east, and has great wheat fields near its banks. Tell where it rises, through what countries it flows, and into what it empties.

The Rhine rises near the source of the Danube, flows northward through a



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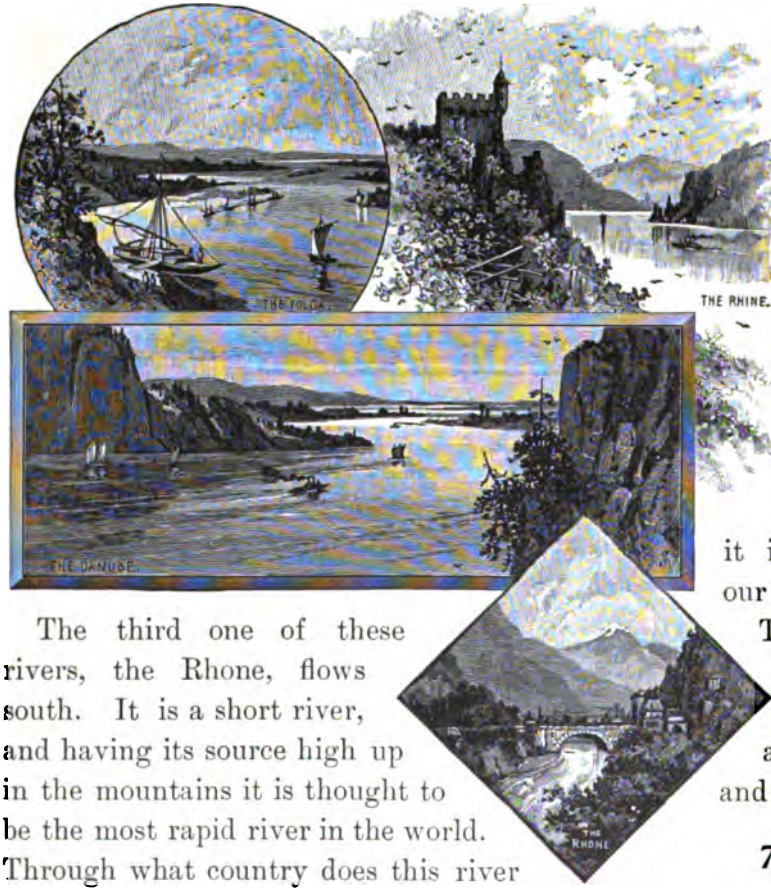
beautiful country, and has vineyards and many famous castles on its banks. Through what countries does it flow? Into what does it empty?



The third one of these rivers, the Rhone, flows south. It is a short river, and having its source high up in the mountains it is thought to be the most rapid river in the world. Through what country does this river flow? Into what does it empty?

Find one more river, the longest in Europe, which flows through a great plain into the largest sea in the world, which has no outlet. Name three other rivers of Europe.

70. Climate.

The climate of Western Europe is more mild and moist than that of the United States; but Russia, in Eastern Europe, is so far from the ocean that it has an extreme climate, very hot in summer and cold in winter.

South of the Alps the climate is about as warm as that of our Gulf States; north of the Alps to the North Sea, it is about like that of our Northern States.

The countries lying northeast of the North Sea are cold away from the coast and are not very fertile.

71. Products.

The productions of Northern Europe are similar to those of all other cold regions. The central portion is the great agricultural region, where wheat, barley, rye, and potatoes, grapes for wine, flax for linen, hemp

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for ropes, and beets for sugar are raised. In the warm southern peninsulas fruits are everywhere abundant, — oranges, lemons, olives, figs, and grapes. There also mulberry trees are grown, upon whose leaves the little silk-worms feed.

Although much grain is raised in Europe, yet the amount is not enough for all its inhabitants. Our country sends to them wheat and corn, as well as cotton, beef, coal-oil, and other products. From Europe we receive many manufactured goods.

72. Animals.

Wolves, foxes, and deer similar to those of North America, and brown bears, which are unknown on our continent, are found in Europe, but most of the animals are domestic. Can you tell why this is so?

REINDEER.

In the northern part the reindeer thrives on the moss-like plants under the snow. Among the ragged cliffs of the Alps the wary ibex and a beautiful, swift animal called the chamois make their home. The skin of the chamois furnishes the real chamois leather. The ibex has long horns. It is becoming rare.

CHAMOIS.

IBEX.

73. Countries.

Europe is not much larger than the United States, but it has nearly six times as many people.

All the white people in our country are Europeans or their descendants.

In Europe there are many important countries. The six most important ones, called the Six Great Powers of Europe, are Great Britain, Germany, France, Austria-Hungary, Russia and Italy.

Let us imagine ourselves on a mountain in Switzerland and looking over Europe. To the northwest lies France, and eastward from France lie in order Belgium, The Netherlands, Germany, Austria, and Russia. Away to the southwest is the peninsula of Spain and Portugal. South of us is Italy, and southeast the Balkan Peninsula, in which lie

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Turkey and Greece. The countries in the northern peninsulas are Sweden, Norway, and Denmark. West of the continent are the British Isles, the most important country of Europe.

74. The British Isles.

The British Isles comprise two large islands and many small ones near them. The largest island is Great Britain. The southern part of this island is England, the home of the English people, and the northern part is Scotland, the home of the Scotch. Ireland, the home of the Irish, is the large island west of Great Britain. These islands, with many possessions on all the continents, form the British Empire, the largest, richest, and most powerful kingdom in the world.

The shipping of England is greater than that of all the rest of the world. No other country produces so much coal; and only the United States produces more iron. No other country has so many colonies, so large a navy, such extensive commerce, such a variety of manufactures, nor, considering its size, so many large towns as has England.

The largest of these towns, and the largest city in the world, is London. It has over four million inhabitants, about as many as New York, Chicago, and Philadelphia combined. The commerce of London is very great.

London is so vast a city, and has so many magnificent and interesting buildings, museums, and churches, that a stranger must stay there a long time to see them all.

On the next page is a picture of Windsor Castle, where Queen Victoria, the present ruler of this great kingdom, lives much of her time.

Most of the steamers from New York to England land at Liverpool, the sec-

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ond great seaport. The greatest manufacturing city of the world is Manchester.

Scotland is a country of grand scenery. There are many inlets of the sea and ocean extending into the land, so that no part of the country is more than forty miles from salt water. The largest of these inlets of the sea are called firths. How many firths do you see on the map?

WINDSOR CASTLE.

A PIPER OF SCOTLAND.

Scotland is a very mountainous country, and has many beautiful rivers and lakes. The surface of Scotland consists of the highlands and the lowlands. What part of the United States resembles Scotland in its mountains and coast?

The great commercial and manufacturing city of Scotland is Glasgow. Edinburgh, the capital, has famous schools.

Ireland has the moist winds from the Atlantic, and its vegetation is so green that it is often called "The Emerald Isle." There are, however, large tracts of land called bogs that are brown and dull, but these bogs are very useful because the turf or peat can be dried and used for fuel.

CUTTING PEAT IN IRELAND.

Many of the people find it so hard to get a living there that they emigrate in large numbers to our country and to Australia.

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Ireland has a beautiful capital, Dublin. This city has wide streets and magnificent parks.

"The Manchester of Ireland" is Belfast.

Where are the British Isles? Name two of them.

Which is the largest city in the world? Describe it. Where is Liverpool? Manchester? For what are Liverpool and Manchester each noted?

In what respects does England surpass other nations?

Where is Scotland? Name two cities of Scotland.

Where is Ireland? Why is it called the Emerald Isle? What are "bogs"? What is meant by saying "The Manchester of Ireland is Belfast"? Where is Dublin?

75. Switzerland.

Switzerland is the only important inland country of Europe, and it is the most mountainous.

It has been called the playground of Europe, because so many people go there to see its wonderful mountains and lake scenery.

Switzerland sends to our country watches and clocks, curiously carved wooden articles, woven silks, cottons, and various kinds of cheese.

The capital of Switzerland is called Berne. The word *Berne* means bears, and there are many images of bears about the city. Magnificent peaks of the Alps can be seen from this place.

Geneva, on Lake Geneva, is noted for the beautiful watches that are made there.

How does Switzerland differ from the other countries of Europe? What attracts travelers every year to Switzerland? What are the exports of Switzerland? What is the capital?

A VILLAGE IN SWITZERLAND.

76. France.

France is one of the great countries of Europe. It is fortunate in having shores on the Atlantic Ocean and on the Mediterranean Sea. Its boundaries are natural ones of water and mountains, except in the northeast, where it joins Belgium and Germany. The French people have had many wars with the English and with the Germans, and each nation has a large army.

Silk, cotton, and woolen goods are made in France. The French also make more wine than the people of any other country.

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The French are a gay, pleasure-loving people. No city in the world has so much that is interesting, amusing, and beautiful as Paris, the capital of France.

London is called the business capital of the world, and Paris the pleasure capital.

All over Paris are small, open squares where the happy French children play. There is a large garden containing many kinds of animals, and there are many parks, beautiful with statues and flowers and fountains.

Lyon is the second city of France in population. It is a great silk manufacturing city.

UNTER DEN LINDEN, BERLIN.

Find France on the globe. Look at the rivers on the relief map, and see which way the land slopes. What does France produce? In what city is a great deal of silk manufactured?

What would you like to see in Paris?

77. Germany.

Germany, like the United States, is a country composed of several states. The chief of these states is Prussia.

In the north the land is low and level, but in the center and south it is high, and has many famous mountain ranges. In these mountainous regions are mines of silver, iron, coal, copper, zinc, and quarries of marble.

Germany, like England, has a great number of large and beautiful cities. Most of these cities are very old, and contain quaint-looking buildings built many centuries ago. Many of the small towns are noted as having been the birthplace of a famous poet or painter or musician or general, or else for some great siege or battle.

In the old German towns the streets are very narrow and winding, and sometimes the top stories of the houses almost touch, for each story projects farther into the street than the one below it. The roofs of the houses are of red tiles, and are often moss grown.

The largest city and the capital of the German Empire is Berlin. London and Paris are the only cities of Europe that have more inhabitants than Berlin.

Berlin has been called "an oasis of stone and brick in a Sahara of sand," because the city with its beautiful buildings has been built in a very level, sandy region. Its

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streets are long and broad. The one that has the most beautiful palaces is broader than most streets in this country, and is called Unter den Linden (Under the Lime Trees), because it is planted with four rows of lime trees.

Hamburg is the most important port of Germany. Here the greatest amount of commerce is carried on.

Bremen is the second port. From Bremen the most of our German immigrants come.

Cologne, on the Rhine, is famous for its cathedral and for its Cologne water.

Have you heard about any other German city?

SCENES IN GERMAN TOWNS.

Where is Germany? In what respects does it resemble the United States? Describe the surface of Germany. What mines are in Germany? What rivers in Germany? Name a large city on each. Describe the streets in many of the old German towns.

What is the capital of Germany? Name four other German cities, and tell something about each. At which German city would you find the greatest amount of shipping?

Why is a line of steamships between New York and Bremen necessary?

78. Austria-Hungary.

Austria-Hungary is situated in the middle of Europe. What coast line has it? It has a double name because the two separate countries, Austria and Hungary, are united under one ruler.

Mountains nearly surround it on the east, north, and west.

Find on the map the rivers of this country. Which is the largest one?

In what part of the country are the best farming lands? Where do you suppose the mines are?

What sea does it border?

Its commerce is mostly upon the Danube and Black Sea.

Should you travel through Austria-Hungary, you would hear many languages spoken.

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Once there were many small and weak nations there, but now they are united and strong.

The capital of Austria-Hungary and also of the kingdom of Austria is Vienna, on the beautiful Danube River. It contains many handsome public buildings, and is one of the finest cities in Europe.

On an island in the river is the finest park in the world.

Budapest is the capital of the kingdom of Hungary. It consists of two cities on opposite shores of the Danube, which are connected by a fine bridge.

Another beautiful city is Prague, which has so many towers that it is known as "The town of the hundred towers."

PEASANTS OF AUSTRIA—HUNGARY.

Where is Austria? Where is Hungary? Are these one nation or two nations? Name two of Austria-Hungary's great rivers. Describe its capital. What are the occupations of the people?

Both capitals are on what river?

Which capital is composed of "twin cities"?

79. The Balkan Peninsula.

The eastern of the three southern peninsulas of Europe is occupied by Turkey and Greece, and several smaller states that have recently been formed from Turkey.

The capital and chief city of Turkey is Constantinople. It is situated on the strait leading to the Black Sea, and has a fine harbor. Constantinople is built upon seven hills, and with its palaces, rivers, and gardens seems, from a distance, the most beautiful city in the world. Its streets, however, are for the most part very dirty and crowded with beggars and hungry dogs.

Southwest of Turkey is the little country of Greece, which has more coast line in proportion to its size than any other country of Europe. It has many mountains and very fertile valleys. Thousands of acres of land are covered with currant vines. Greece is famous for its sculptures and archi-

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tecture. Athens, its capital, is a celebrated city. In it are many ruins that tell of its former glory.

Where is Turkey? Constantinople? Describe Constantinople.

Where is Greece? What can you say about its coast line? Is a country with such a coast line a level or a mountainous country? Compare it with Norway in this respect.

For what is Greece famous? What is its capital?

CONSTANTINOPLE.

TURKISH HAREM.

80. Italy.

Italy is the central one of the three southern peninsulas of Europe. Its northern boundary is the Alps, and on all other sides it is surrounded by the sea. What does it resemble in shape? What large islands are near Italy?

The northern part of Italy is a very fertile plain, through which the river Po runs. Mulberry trees are here grown.

A range of mountains called

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the Apennines extends through the long peninsula.

There are several volcanoes in Italy. One of them, Vesuvius, near Naples, long ago buried two cities by an eruption. On one of the small islands in the Mediterranean is a volcano always burning, and known as the "Lighthouse of the Mediterranean."

Italy was once occupied by the most powerful nation of the world, and it is a country which people eagerly visit because of its many famous cities with their wonderful works of art and ruins of ancient times.

VENICE.

Rome, its capital, was once the largest and most powerful city in the world. It is now a wonderful city, where every broken column and almost every stone has a story to tell.

In Genoa many ships are built and furniture, silks, and laces are made. Columbus was born near there.

Venice is a curious old city with interesting churches and palaces. It has canals instead of streets, for the city is built upon many islands.

It seems strange to us that the people who have always lived in Venice have never seen a horse, but they think it strange that all do not know about their pretty boats, or gondolas, which they use on their canals.

The most beautiful city of Italy is Naples. It is also the largest city.

Where is Italy? What are its boundaries? Where is the river Po? What mountains in Italy? Why do people of other lands like to visit Italy? What can you say of volcanoes in Italy? Describe Rome; Venice; Naples.

81. Spain and Portugal.

The nations occupying the southwestern peninsula of Europe were once the richest and most powerful nations of the world, but now they are far behind most of the countries of Europe.

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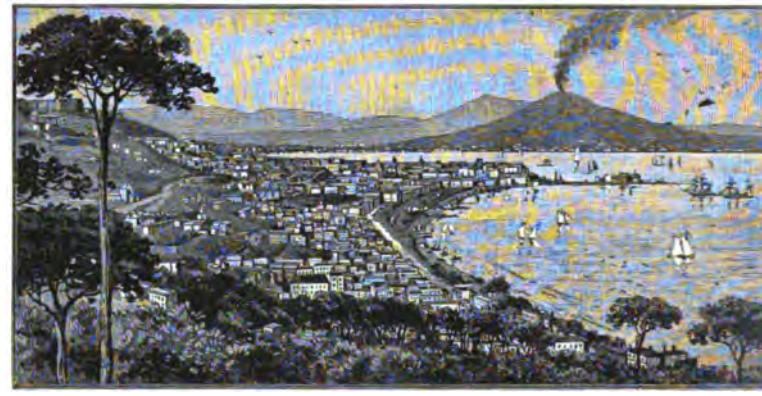
In this peninsula are two nations, Spain and Portugal.

It was Isabella, the queen of Castile, a kingdom of Spain, who furnished Columbus with means to start out on his voyage of discovery. Spanish adventurers conquered Mexico and Peru. Portuguese sailors first sailed around the Cape of Good Hope, the southern point of Africa.



NAPLES AND VESUVIUS.

The regions of Spain along the shores are very fertile, while in the center there are great, bare tablelands. The Spanish people say that "swallows crossing this tableland must carry provisions with them."

A STREET IN NAPLES.

Most of the people are farmers. They cultivate, besides the grains, the olive and mulberry trees, and vineyards. Most of our corks come from cork trees which grow in Spain. Merino wool comes from Merino sheep, which are natives of Spain. There are rich mines of iron, coal, copper, lead, and quicksilver in Spain.

Most of the towns of Spain are many centuries old, and are quaint places with curious, interesting buildings. The Alhambra, or red palace, is one of the most beautiful buildings in all Europe.

The capital and largest city is Madrid.

If you should visit this place some summer afternoon, you would see the workmen lying asleep in the street, under the shade of the trees, or by the fountains. It is so hot then that no work is done till late in the afternoon.

Portugal lies along the Atlantic seaboard. Its people, its soil, and its

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products greatly resemble those of Spain. Lisbon, its capital, is a very beautiful city built on a number of hills.

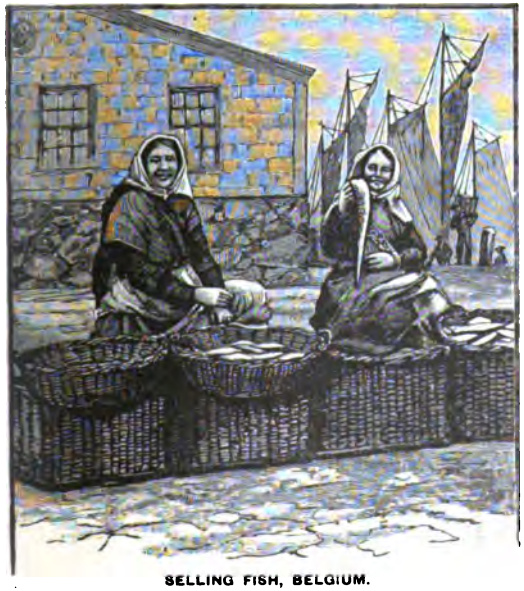
Why do you think of Spain when you think of Columbus?

What part of Spain is fertile? What part is barren? What are the products of Spain? Describe the Spaniards. In what respects is Portugal like Spain?

THE ALHAMBRA.

82. Belgium.

Belgium has been called "The Battle-field of Europe," "The Garden of Europe," "One Large Town." What



SELLING FISH, BELGIUM.

do these phrases tell you about the country?

It is a thriving and beautiful land. The people near France are mostly French; near The Netherlands, Dutch. Brussels is the capital and largest city of Belgium. Have you heard of Brussels lace and Brussels carpets that are made here? Antwerp is a large city, and carries on an extensive foreign trade.

What are some of the names given to Belgium? Is it a large country? Name two cities of Belgium. Name some things manufactured in one of them.

83. The Netherlands.

The Netherlands is the home of the Dutch. It is a very interesting country to visit, for it is quite different from any part of our own country. The land is so low and flat that the

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SCENE IN THE NETHERLANDS.

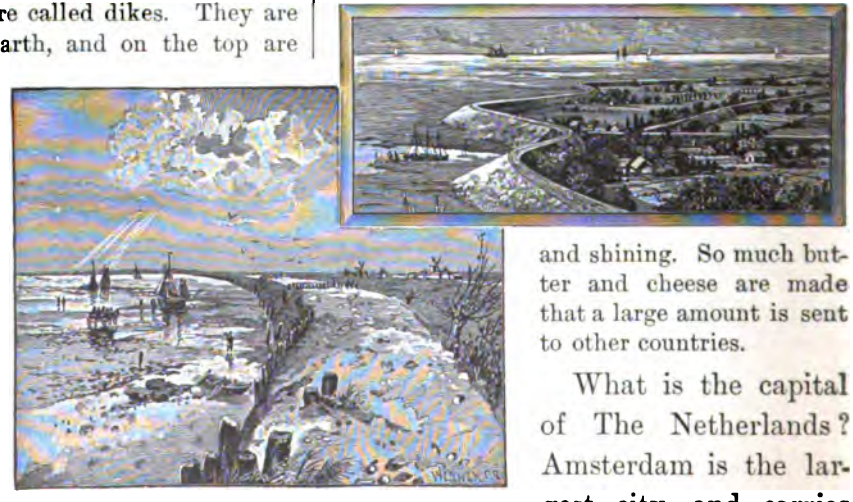
sea would overflow much of it did not the people build walls to keep the water out.

They drive two rows of long piles deep into the ground, one row within the other, and fill the space between with huge blocks of granite. These walls are called dikes. They are banked up with earth, and on the top are often roads, trees, and even buildings. Sometimes the sea succeeds in breaking through these dikes, and hundreds of people are drowned.

Canals have been dug over the land, and huge windmills built to pump the water from the land into the canals. These windmills are also used to saw logs, grind corn, etc. One can usually tell how wealthy a farmer is by counting the number of windmills he owns.

In the towns one sees boats passing through the streets, and red brick houses showing through dense foliage. During two or three months of the year the canals are frozen over. Then every one skates, even the smallest children on their way to school. They greatly enjoy their ice boats, which are mounted on runners and driven along by sails.

Here are few poor people. Every one seems contented and happy. The Dutch all work hard. They keep their homes very clean, and are fond of seeing everything bright and shining. So much butter and cheese are made that a large amount is sent to other countries.



DIKES OF THE NETHERLANDS.

What is the capital of The Netherlands? Amsterdam is the largest city, and carries

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on a great trade with other countries.

Many of the islands of the East Indies and of the West Indies belong to The Netherlands.

Where is The Netherlands? Is it a large country? Describe its surface. What are dikes? How are they made? What are they for?

A NORWEGIAN FIORD.

Compare The Netherlands and Switzerland. Tell all you can about the Dutch.

84. The Scandinavian Countries.

The largest peninsula of Europe is in the northwestern part. It is called the Scandinavian peninsula, and contains two kingdoms, Norway and Sweden, separated from each other by mountains. South of this peninsula there is another which juts out northward from Germany. This peninsula, with the islands near it in the Baltic Sea, is Denmark.

The Danes, who live in Denmark, the Swedes of Sweden, and the Norwegians of Norway, are called Scandinavians. These people resemble one another in many ways, and they speak languages that are much alike. Almost all of them have blue eyes, fair skin, and light hair, and they are a strong, light-hearted, industrious people.

Norway.—The Norwegians have a beautiful, mountainous country. Look at the map of Norway, and see how the ocean reaches as if with long arms, called fiords, into the land; notice the many islands all along the coast; you will then see why the Norwegians have always been tempted into boats, and why they have been such good sailors. Most of the people who are not sailors are engaged in fishing, or in felling the trees of their rich forests, or in taking care of their cattle.

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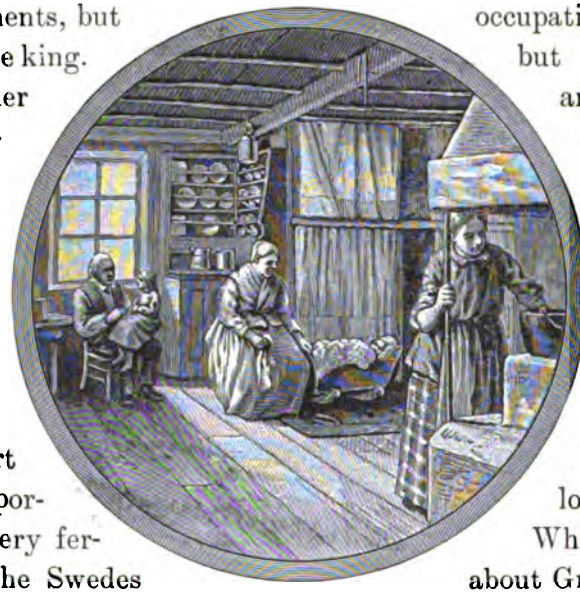
Norway for a long time belonged to Denmark. The people celebrate the 17th of May, the anniversary of their separation from that country in 1814, with cannon-firing, fireworks, and processions, just as we celebrate the 4th of July. Norway and Sweden have separate governments, but are under the same king. What two other countries of Europe have but one ruler? The capital of Norway is Kristiania.

Sweden.—Sweden is a country for the most part level, and some portions of it are very fertile. Some of the Swedes are fishermen, and others lumbermen, like the Norwegians, but most of them are occupied with cultivating their small farms.



INTERIOR OF SWEDISH PEASANTS' HOME.

In winter, which lasts four or five months, the children have great fun in coasting and skating, building snow forts, going on sleigh-rides, or even in sailing over the frozen lakes in ice yachts.

Their merry-making at Christmas time lasts two weeks. At this time the farmers never forget to put out a sheaf of grain for the birds.

The capital of Sweden is Stockholm.

Denmark.—The land of the Danes is very low and flat. The western part of the peninsula is covered with sand, and is inhabited only by fishermen.

The Danes have about the same occupations as the Swedes, but their dairy farms are much larger, and are famous for their fine butter and cheese.

The capital of Denmark is Copenhagen.

Far out in the Atlantic are many islands which belong to Denmark.

What have you learned about Greenland?

Iceland.—One of the islands belonging to Denmark is Iceland. It has a climate like that of the extreme north of Europe.

It is a cold, barren country. Only a very few stunted trees grow there. The island is noted for its many volcanoes and geysers.

The largest geyser when quiet is a large pool of clear water. After several quiet hours, sounds of explosions under the ground

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are heard, the water begins to boil, and soon, like a great fountain, the hot water is thrown from the center of the pool a hundred feet or more into the air. This lasts about ten minutes, and then the geyser is still again. Others of the hot springs are constantly boiling.

A GEYSER IN ICELAND.

Fish, wool, and horses are the chief exports of Iceland.

REVIEW QUESTIONS.

Which are the Scandinavian countries?

Describe the Scandinavians.

What leads many Norwegians to become sailors?

Why do they eat rye bread rather than wheat bread?

[Rye grows farther north than wheat.]

Would corn grow well in their land?

How does Sweden differ from Norway?

Describe Denmark.

Tell about the geysers of Iceland. What are the exports of Iceland?

85. The Russian Empire.

The land of the Russians is a vast country, extending throughout the central and northern part of Europe, and the northern part of Asia. That part of

A SIBERIAN VILLAGE.

this country which is in Europe is called Russia; that part in Asia, Siberia. Russia is larger than the rest of Europe, and Siberia twice as large as Russia.

The Russian Empire is a great plain, having large barren regions, immense fertile grain fields, and the largest forests in the world, except those of the Amazon. This plain is crossed by eight very long rivers. Why must these rivers be long? Much of Siberia is covered with snow and ice, and is not inhabited.

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The ruler of this great empire is called the Czar, and his will is law. There are many rich people in Russia, but the peasants are very poor and ignorant.

St. Petersburg, the capital, is a very large city. It contains many magnificent buildings.

THE KREMLIN, MOSCOW.

The river on which the city is built is frozen over for about four months of the year. The people wrap themselves in furs and greatly enjoy the long winter, with all the sports on snow and ice.

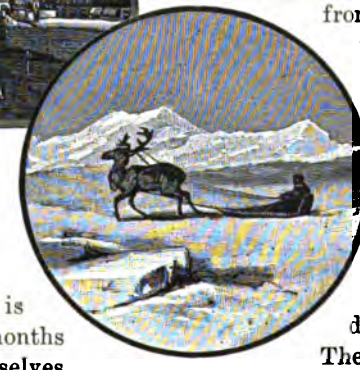
Moscow is an old city and was once the capital.

It has a most beautiful citadel called the Kremlin, where each Czar goes to be crowned.

86. The Lapps.

In the northern part of Europe, from the shores of Norway to the White Sea, is Lapland, the home of the Lapps or Laplanders. To what three countries do the Laplanders belong?

Their home is a bleak, dreary region of snow-covered mountains and level wastes. The Lapps who live along the coasts are fishermen, but most Lapps wander about among the mountains with their reindeer.



A LAPLAND SLEDGE.

A Lapp who has a herd of reindeer is a rich man. He lives upon reindeer milk and flesh, his clothing and tent are made from the skins of reindeer, and when he wants to go anywhere reindeer draw his sledge. Do you wonder that in summer, when the mosquitoes on the plains torment the reindeer, the Lapps go with them to the cold mountains to live? Upon what do the reindeer feed?

The Lapps do not put bits in the mouths of the reindeer but guide them by cords tied around their horns.

The Lapps are very short in stature. Their huts, or houses, are small and low, having only a single room with no windows nor chimneys. There is a hole at the top for the smoke to escape. Should you like to live in such a dark and smoky place? Thick sods cover the hut on the outside so as to keep it warm.

Within there are reindeer skins on the floor on which the Lapps sit and sleep. For the baby there is a little boat-shaped cradle of wood, lined with dry moss. Sometimes this cradle is hung to the side of the hut by cords, and sometimes the mother carries it on

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her back, supporting it by a band around her forehead as the Indian women do.

Where is Russia? How large is it? What are the two parts of the Russian Empire?

SCENE IN LAPLAND.

Describe the surface of Russia. Describe the capital of Russia. What is said of Moscow? Compare Siberia and Canada. Compare Asiatic and European Russia. What are the seaports of Russia?

Where is Lapland? To what country does the larger portion of it belong? Describe Lapland. How do the Laplanders live? What people do they remind you of?

REVIEW QUESTIONS.

Where is Europe? What separates it from Asia? From Africa? Name five seas bordering Europe and tell between what bodies of land each lies.

What islands northwest of Europe? What sea separates them from Denmark? Between what seas is Denmark? Find three peninsulas in the south of Europe, and two in the north of Europe.

Describe the relief of Europe. Name five rivers of Europe. What is raised in the north of Europe? In the center? In the south? Compare Europe with the United States as to size; as to population. Name the six Great Powers.

Name the central countries. The countries of the northern peninsulas. The countries of the southern peninsulas. The inland countries. The island country. Tell what you learned about the cities of Europe.

What country of Europe would you like best to visit?

A LAPP CRADLE.

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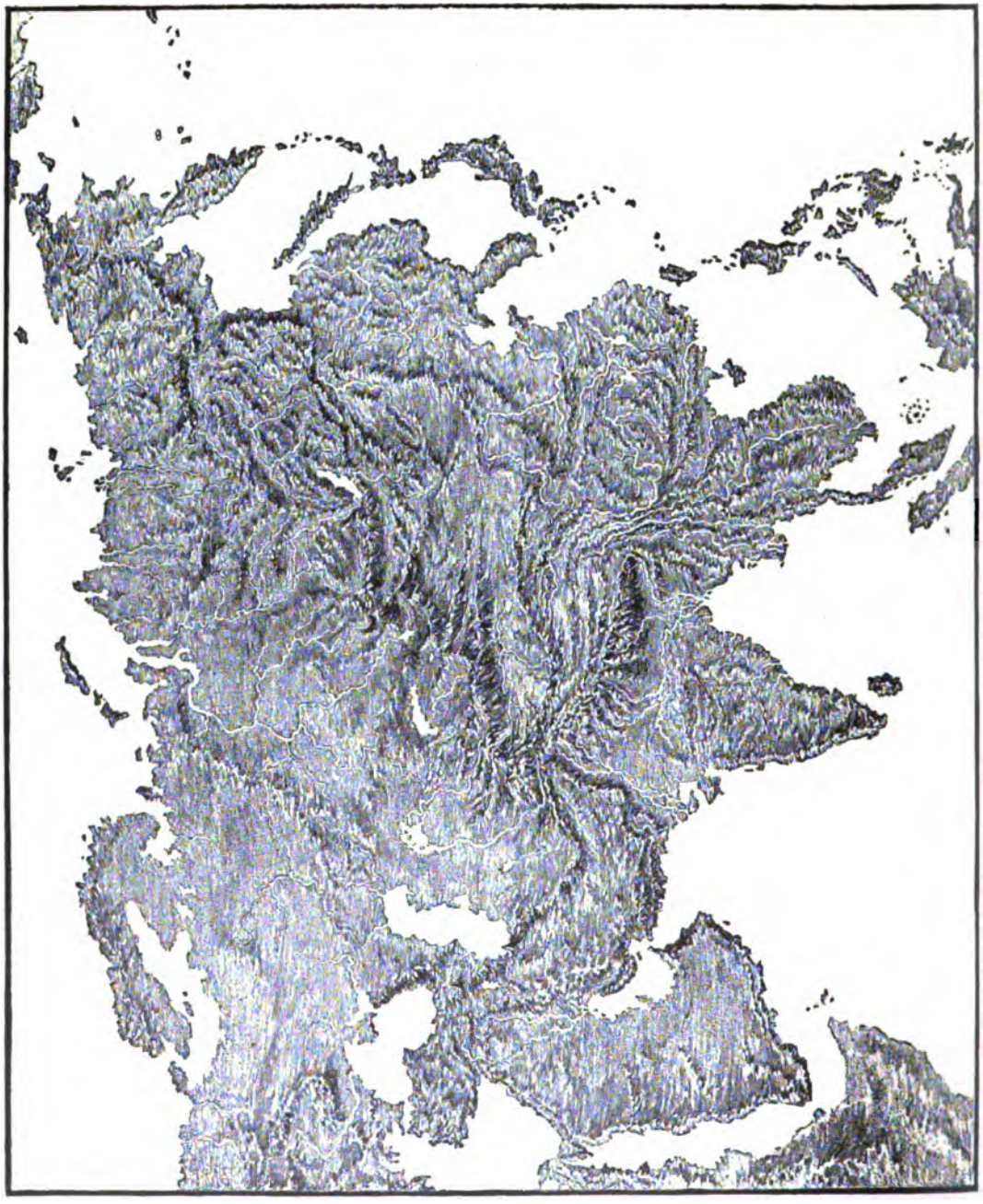

RELIEF MAP OF ASIA.

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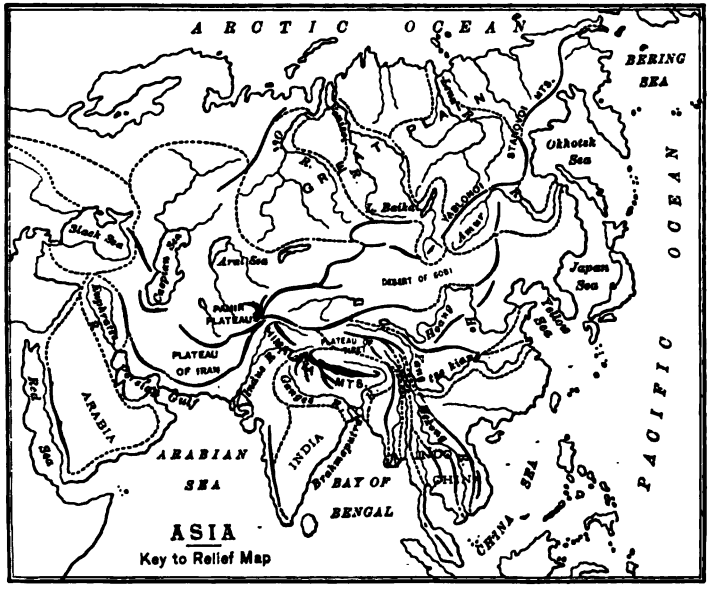
ASIA.

87. Position and Relief.

Asia is the largest of the land masses of the world. Both in area and elevation it is the giant of continents. It is larger than the two Americas, and it is nearly equal to Europe, Africa, and Australia combined.

Asia joins Europe in a broad northern plain, and is united to Africa by the Isthmus of Suez.



In Europe we found a central highland (the Alps, etc.), with a great plain sloping north and three peninsulas south. So it is in Asia.

We shall get the best view of the principal highlands of Asia if we begin with the Pamir, or "Roof of the World," and observe the ranges extending from this center.

The great plain north of the central highlands extends across Europe and Asia from the Bay of Biscay almost to the Pacific Ocean, with the slight break of the Ural Mountains, a low and unimportant range.

Trace the southern edge of this plain across the two continents.

From the central highland of Asia great rivers run to the south, to the east, and to the north. What are the chief drainage basins of Asia?

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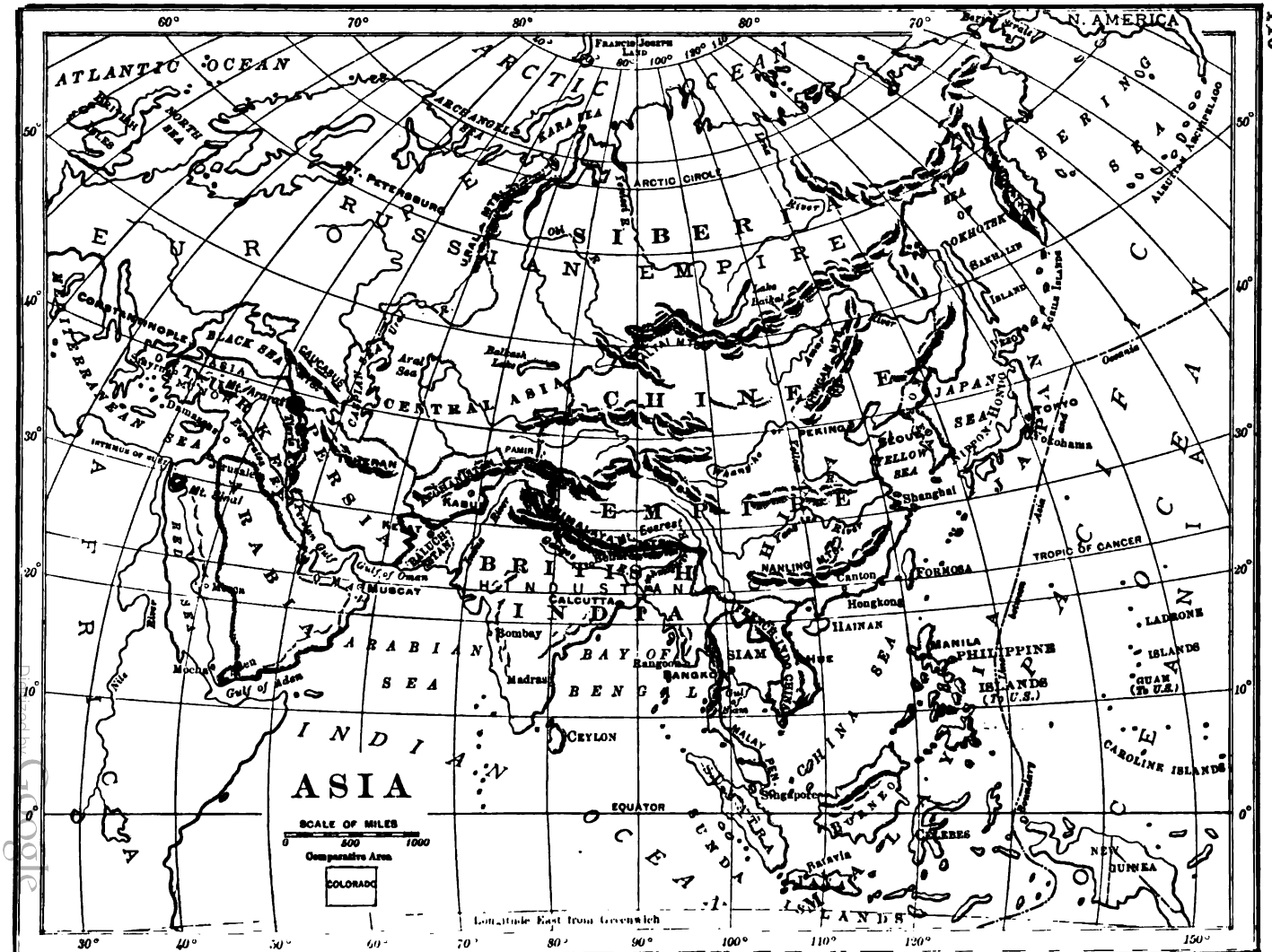
ASIA
SCALE OF MILES
0 500 1000
Comparative Area
COLORADO
Longitude East from Greenwich
ATLANTIC OCEAN
ARCTIC OCEAN
N. AMERICA
BERING SEA
EUROPEAN RUSSIAN EMPIRE
SIBERIA
CENTRAL ASIA
CHINESE EMPIRE
JAPAN
PACIFIC OCEAN
ASIATIC TURKEY
PERSIA
ARABIA
BRITISH HINDUSTAN
INDIA
ARABIAN SEA
BAY OF BENGAL
INDIAN OCEAN
CHINA SEA
PHILIPPINE ISLANDS
CAROLINE ISLANDS
NEW GUINEA
AUSTRALIA
AFRICA
EQUATOR
TROPIC OF CANCER
ARCTIC CIRCLE
CONSTANTINOPLE
BLACK SEA
CASPIAN SEA
ARAL SEA
BALKASH LAKE
LAKE BAIKAL
PERSIAN GULF
RED SEA
GULF OF ADEN
GULF OF OMAN
MUSCAT
MECCA
MEDINA
MOCHA
BOMBAY
MADRAS
CALCUTTA
CEYLON
BANGKOK
SIAM
SINGAPORE
BATAVIA
PEKING
NANKING
SHANGHAI
CANTON
HONGKONG
FORMOSA
HAINAN
MANILA
YEDDO
YOKOHAMA
OSAKA
KIOTO
KABUL
TEHERAN
TIFLIS
ERZERUM
ST. PETERSBURG
ARCHANGEL
KARA SEA
OB R.
YENISEI R.
LENA R.
AMOOR R.
YANG-TSE-KIANG
YELLOW SEA
SEA OF OKHOTSK
SAKHALIN ISLAND
KURILE ISLANDS
ALEUTIAN ARCHIPELAGO
LADRONE ISLANDS
GUAM (To U.S.)
PHILIPPINE ISLANDS (To U.S.)
CELEBES
BORNEO
SUMATRA
JAVA
NILE
EUPHRATES
TIGRIS
MT. ARARAT
MT. SINAI
MT. EVEREST
PAMIR
HINDU KOOSH
ELBURZ MTS.
ALTAI MTS.
YABLONOI MTS.
STANOVOI MTS.
OMSK
TOMSK
IRKUTSK
YAKUTSK
OMSK

88. Climate.

In the southern part of Central Asia the Himalayas, extending east and west, present a sloping surface to the sun, and this makes the climate of the countries south of them very warm. Asia south of the Himalayas is very hot in the summer, and the heat brings the winds from the Indian Ocean, so that during five months of the year this is a region of heavy rainfall.

WILD ASSES.

In spring the rivers of Southern and Eastern Asia carry great floods heavily laden with soil. What effect upon the soil along their lower courses does this have?

North of the Himalayas is the great central highland, and beyond this highland are the broad plains of Siberia, sloping northward. The highland is very cold and is subject to extreme changes of temperature on account of its elevation, its distance from the sea, and its dry atmosphere. Siberia is cold on account of its latitude and its slope northward.

The great rivers of Siberia prove that there is much rainfall near their sources. They are large also because they drain such an immense region.

Which are in the warmer climate, the sources or the mouths of these rivers? Spring freshets starting from the head waters run over the frozen lower stretches of the rivers. What effect on the productiveness of Northern Siberia does this have? Would you like to live in that country?

MUSK-DEER.

What parts of Asia are thickly settled? What parts are thinly settled? What reasons can you give for this?

89. Animals.

The animals of Asia, north of the central plateau, are like those of Europe in the same latitude.

The musk-deer, valuable for its sack of perfume, is found in Central Asia. The wild ass, a very swift animal, and the gazelle, beautiful as well as swift, inhabit the southern regions.

GAZELLE.

The animals of Southern Asia used as beasts of burden and for riding are the camel, the yak, the elephant, the zebu, and the buffalo. What difference do you notice between the zebu and the ox?

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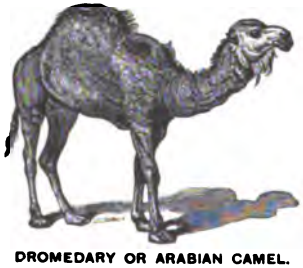
ZEBU.

In the desert regions of South-western Asia the Arabian camel, or dromedary, is of great value.

Its broad feet have thick soles to protect them from the burning sands of the desert; in its nostrils are valves which it can close to keep out the sand blasts; there are great pouches in its two stomachs, which retain water for a long time; and one hump on its back is mostly a store of fat which enables it to go a long time without food. Do you not think this animal has been well named "the ship of the desert"? Could people easily travel over the deserts without the camel?

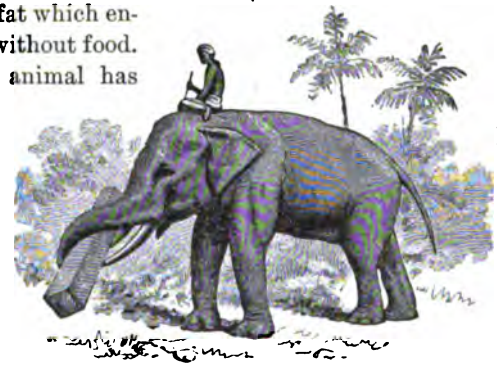
The wild yaks have their home on the high plains of Central Asia, and feed upon the coarse grass found there. The yaks that have been tamed supply their owners with milk, food, and clothing, besides being used as beasts of burden.



DROMEDARY OR ARABIAN CAMEL.

Some elephants of Asia are twice as high as an average man. They live in herds in the forests, usually where there is a marsh. When the natives wish to catch a wild elephant, they take with them tame elephants to go near the wild ones and keep them from noticing what the men are trying to do. Then they fasten the elephant by ropes to trees. The elephant, thus caught, is furious and struggles several days, but when worn out and hungry, it is tamed and taught to do all that a horse does, and many things besides.

YAK.



ELEPHANT AT WORK.

The buffalo does not have a hump on its back as the American bison has. Its horns are very large and crooked and turn outward, while those of the bison are far smaller and turn inward. The tame buffaloes are easily managed. In the jungles of India wild buffaloes, very fierce and dangerous, abound.

The tiger is a fierce animal of the cat kind, found only in Asia. It devours cattle, deer, wild hogs, small buffaloes, and occasionally hu-

TIGER.

BUFFALO OF INDIA.

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man beings. Its fur is striped, very soft and beautiful; from it handsome robes and rugs are made.

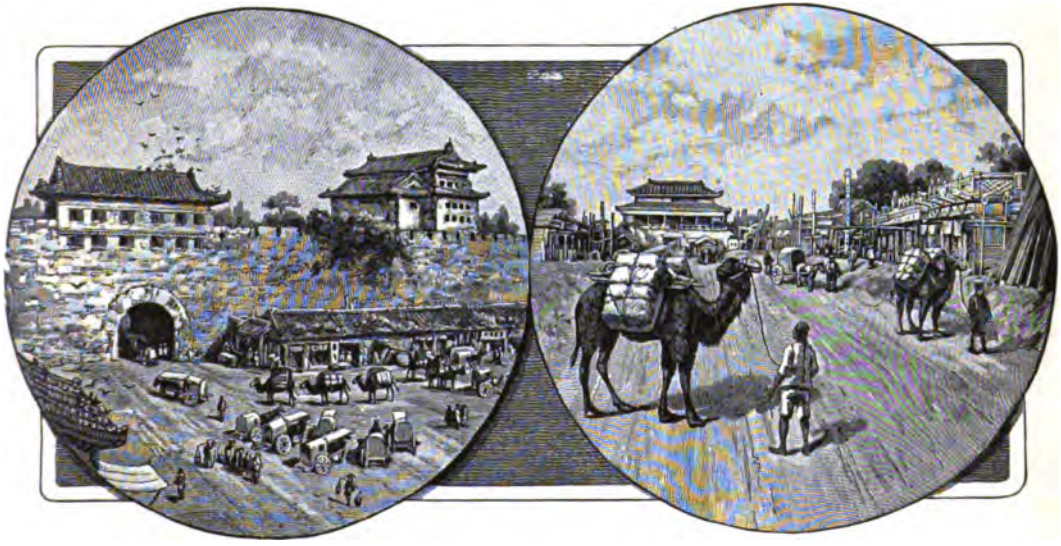
Other fierce wild animals of Southern Asia are the lion and the leopard.

LEOPARD.

The leopard belongs to the same family as the lion. Its yellow fur is thickly spotted with black or deep brown spots.

oldest one in the world. It is larger than all the countries of Europe. No other country contains so many people, nor do the people elsewhere live so closely together as in China.

There are twenty-eight cities in the United States that have more than one hundred thousand inhabitants. China has more than fifty of such large cities. Peking is the capital. Like most cities of China, it is surrounded by a wall, and is composed of two cities, a fortified wall



ENTRANCE GATE, PEKING.

WITHIN THE CITY OF PEKING.

90. China and the Chinese.

China, or the Celestial Empire as the Chinese call their country, is known to us as the land of tea and of the silkworm. It is the largest empire of Asia, and the

separating them. The one is the commercial city, active, full of shops and markets. The other is the official city, where are the offices and buildings of the government. Here, in the midst of a vast park, is a palace of the emperor.

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CHINESE OFFICIAL.

Canton is the chief commercial city of China.

HOUSES IN CHINA.

It is larger and cleaner than most other Chinese cities. Where is it situated?

Chinese houses are one or two stories high, and are made of small blue bricks, of mud and stucco, of straw, or of other cheap material. The roofs are thatched with straw or covered with tiles. Most of the houses contain three or four rooms not more than ten feet square. At night doors and windows are closely shut, but the Chinese seem to thrive without any ventilation. The streets in China are very filthy and narrow, often blocked with donkeys and loaded wheel-barrows.

Many Chinese have gone to Australia and California, but they a'vays expect to return to this "Flowery Land" to spend their money and to die.

In almost all of our large cities there are Chinese laundrymen, and you are familiar with their round, yellow faces, black, bead-like eyes with slanting lids, high cheek bones, thick lips, thin beards, and coarse black hair shaved in front and braided in a queue behind. Their dress is peculiar, consisting of a kind of loose jacket, or tunic, fitted closely around their necks, wide trousers, and shoes of cotton or silk with thick felt soles.

These Chinamen are usually from the lower classes, and they seem to us so ignorant that it is difficult for us to realize what intelligent and skillful people the Chinese really are, and that more than two thousand years before our continent was discovered they were a civilized people.

The Chinese of to-day are very patient, economical, industrious, skillful, and clever in imitating articles, but they have no ability to invent anything new, and in character they are cowardly and untruthful.

BOY AND GIRL.

CHINESE LADY.

The Chinese of the higher class are the only people who cripple the feet of their girls by bandaging them tightly. Of course this is very painful, but they think the poor deformed foot far prettier than one which is large enough to

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walk upon comfortably. Have you ever seen one of the tiny shoes which they wear?

The Chinese ladies of the wealthy class wear a long robe of bright-colored silk beautifully embroidered, and a great amount of jewelry, such as pins in their hair, heavy earrings, finger-rings, and bracelets. They seldom leave the house, and when they do they are seated in a sedan chair with curtains closely drawn. The chair is carried on the shoulders of several men.

Rice is the food upon which the people mainly live. They do not eat beef. Milk, butter, and cheese are unknown. They have no fields of grass nor cattle in pastures. At their meals they do not use knives and forks, but long ivory or wooden sticks called chopsticks. It is from China that most of our tea and much of our silk come. Delicate embroideries, carvings of ivory, engravings on wood and stone, and lacquered wares are also sent to us.

The Chinese are skillful farmers, and cultivate the same kinds of crops that are raised in our southern states. Tea is grown on the hillsides, and exported in great quantities. Other products are salt, opium, and camphor.

CHINESE PAPER MONEY.

How would you like to spend ten years at school in learning to read and to write? This is what the Chinese boy must do, for he has a far harder language than ours to learn. His language has no alphabet, but each word is represented by a different character. As there are from forty to seventy thousand words in the Chinese language, no one knows just how many, you see what a hard task he has before him.

The words are written in columns, and from right to left on the page. Their writing is done with a small brush and India ink.

The money which the Chinese use is very inconvenient. Their silver usually comes in blocks weighing from four to five pounds; and it takes a dozen strings of "cash," or pieces of copper, one hundred pieces on a string, to make one dollar of our money. Paper money, like the bills shown on this page, can be had; but every place has its own paper money. One place will not take the paper money of other places.

Where is China? How large is it? Describe its capital. What is the chief commercial city? Describe the Chinese as to appearance and dress; as to character. Describe their houses. How do ladies of the wealthy class dress? What is the principal food of the Chinese? Do the Chinese use horses when they travel?

What are the main exports from China? What do the farmers raise? What can you tell about the Chinese language? What can you tell about the money of China?

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91. Japan and the Japanese.

Five large islands and a great number of smaller ones off the eastern coast of Asia form the Empire of Japan, or

JAPANESE LADY.

the "Land of the Rising Sun," as it is often called. Tokyo, the capital, has more than one and one-half million inhabitants.

On these islands are about forty million people. The Japanese look somewhat like their neighbors, the Chinese, for they belong to the yellow race and have a yellow complexion, coarse hair, and low stature, but their brows are higher, their faces more oval, their eyes not so slanting, and their cheek bones not so prominent. They are far more intelligent and wide awake, too, than their neighbors.

The Japanese women are very pretty; and in their wide-sleeved, gay-colored, flowing dresses, they are a very pleasing sight.

The little babies are never dressed in white, for that is the color used for mourning in Japan, but in bright reds and yellows. Their heads are kept shaved until they are old enough to go to school.

When the little Japanese baby is only a few weeks old, it is tied by long bands of cloth to the back of some older sister or brother to be carried about while its mother is busy. Often the little nurse is only five or six years old, and baby's little smooth brown head swings back and forth as the little child runs and jumps about. This does not seem to us very comfortable for either the nurse or the baby; but the baby soon learns to cling tightly with hands and feet, and the little nurse flies kites or plays hop-scotch just as he would without any baby on his back.

JAPANESE GIRL AND BABY.

The older people in Japan ride about in a *jinrikisha*, or "man-carriage," a sort of buggy on two wheels drawn by a man instead of by a horse. This man is not unwilling to go forty or fifty miles a day. How many miles can our horses travel day after day?

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On the 3d of March comes the Feast of Dolls, the great yearly holiday for all the little girls. The boys have their holiday on the 5th of May, and this is a still more important time. How many boys under seven years of age there are in each house can be told then by the number of huge paper fish of all colors that float from the top of a bamboo pole near by.

The houses in Japan are low, wooden buildings, with flat, heavy roofs. There are no good building-stones in Japan, and the houses must be low because high buildings are in greater danger from the earthquakes which so often occur there. On entering a house one takes off his shoes or sandals, and leaves them in the entrance hall. The door is a sliding screen, and paper screens serve for windows; but there are sliding shutters which can be closed at night or during heavy rains. Inside there are panels that slide in grooves, so that the one large room of the house can quickly be divided into several compartments. There is no furniture within, no carpets, no stoves or furnaces. The floor is covered with matting, and on this the Japanese sit with their legs bent under them. While sitting in this way, their food, consisting chiefly of rice and fish, is brought to them. Their bed is only a blanket thrown on the matting, which in the daytime is rolled up and put away.

SCENES IN JAPAN.

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JAPANESE HOUSES.

How do the Japanese differ from the Chinese? How are their babies cared for? In what do the Japanese ride? Describe the houses in Japan.

What can you tell about the rice fields? About the shops and trading?

CARRYING TEA LEAVES.

In the country, men and women work in the rice fields all day, standing ankle-deep in the sticky mud; these fields are kept flooded with water most of the time.

The shops of Japan are very different from stores in our large cities. It takes a long time to make a purchase, and no one seems in any hurry. You enter what seems like a covered platform, sit down upon the matting, and a boy offers you some tea. A clerk comes and welcomes you, for the Japanese are very polite people; he pushes a charcoal brazier[1] towards you so that you can light one of the tiny pipes which Japanese men and women often carry about with them; and then you inquire for what you want. Little boys are sent across to the warehouse on the other side of the platform for the goods wanted.

In the small stores all goods are within the reach of the proprietor, and his customers sit on the edge of the platform. If you live in a large city, you should visit a Japanese bazaar and see what are the articles which the Japanese send over for us to buy.

Where is Japan? How far along the coast of Asia does Japan extend?

[1] An earthen or brass dish full of live coals.

92. Indo-China.

The large south-eastern peninsula of Asia is called Indo-China, or Farther India. The British and the French have extensive possessions on this peninsula.

Singapore, a British city, is one of the great centers of trade in the far east.

There are also independent states here. In the middle of the peninsula is the kingdom of Siam. The natives belong to the yellow race, the race to which the Chinese and Japanese belong.

Bangkok is the capital of Siam. It is called the "Venice of the East." A great part of the city is built in a river on huge bamboo rafts. These rafts, which are bound together by immense chains, are moored to

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great poles driven into the bed of the river. These floating houses can be reached only by boat, for there are no footways as in Venice.

A white elephant, a very rare animal, is worshiped in this country of Siam, as well as in Burma, another division of Indo-China. The elephant is kept in a magnificent temple within a palm garden, and is cared for by a dozen priests, who weave wreaths for him and sing songs in his praise. The stall of this sacred animal is a large room covered with a mat of pure, chased gold, and the troughs from which he drinks are of pure gold also.

WHITE ELEPHANT OF SIAM.

Where is Farther India? Why is it called Farther India? Why Indo-China?

What European nations control parts of it?

Where is Siam? What is its capital? Describe it.

What is said of the white elephant of Siam?

93. India and the Hindus.

The peninsula of Hindustan, or India, is called by the English people "the pearl of the British crown." Almost all this part of Asia, fifteen times as large as the island of Great Britain, belongs to the British Empire. Queen Victoria is Empress of India.

This great country is bounded on the north, and part of the east and west, by mountains, and is elsewhere surrounded by the Indian Ocean. It is as large as the United States.

The highest mountains in the world are north of this peninsula. Its fertile plains are watered by many rivers. Among its rivers are three very large ones, the Brahmaputra and the Ganges, which enter the head of the Bay of Bengal by a great many mouths, and the Indus, which flows into the Arabian Sea.

In these river valleys crops of rice and cotton and opium for the Chinese are raised; sugar-cane, coffee, and tea are cultivated; silk is manufactured.

The forests of India are very extensive, and the trees are gigantic.

The palm is the one most frequently seen, and it is exceedingly useful to the natives, for it furnishes them with both food and shelter. The dense

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jungles are the homes of fierce animals and poisonous snakes, which kill thousands of people every year. The elephant is made very useful, as the picture here and the one on p. 148 show you.

TRAVELING IN INDIA.

The word *Hindustan* means "the country of the Hindus." There are so many different races and classes among the Hindus that it is impossible to give a description that will be true of all. They vary in complexion from olive-brown to almost black. They all wear long linen or muslin robes, those of the wealthiest class being beautifully worked in silver and gold. On their heads they wear gay turbans made by twisting several yards of cloth into folds. They are very fond of jewelry, and huge ear-rings, nose-rings, necklaces, finger-rings, anklets, and toe-rings are often seen.

There are many grand temples and palaces and comfortable homes in India, but most of the people live in mud houses roofed with tiles, the light coming in through the door and the few holes in the wall. Some of the houses have walls of light cane or unburnt bricks and roofs thatched with straw. The house furniture is very simple; a mat serves for a chair, there are no tables, and the people use their fingers instead of knives and forks. The houses of the rich are built around a central open courtyard, out of which leads a smaller yard where are apartments of the women. Here the windows are very small, and placed too high up in the walls for any one to look out. The ladies of rank in India very seldom leave their homes, and when they do they are always closely veiled.

A Hindu school is often held outdoors, under the shade of beautiful palms. The boys, with their teachers before them, sit cross-legged upon tiger skins, or upon mats made of palm-leaves. At first they make their letters on the ground with their fingers, and when they can do this well they are given a palm-leaf slate and a short, sharp-pointed iron rod with which to write. Each boy pays a cent a month when he first goes to school; but after becoming more advanced, he pays a higher price for his instruction.

A VILLAGE IN INDIA.

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The people of India are divided into several classes, or castes, and a man of one caste will never eat food that has been prepared by one of a lower caste than he.

Among the poor people there is much misery. The average wages for a man and his family is only about five cents a day. Rice is their chief food. Millions of Hindus have never tasted meat. They will not eat beef, for they consider cows to be sacred animals, and it would be a crime to kill one. So many animals are sacred that they are seen everywhere; flocks of parrots flying about, magnificent peacocks perched on fences, and monkeys playing in the woods and devouring the crops in the fields. Even the deadly cobra is allowed to go undisturbed.

The Ganges is the sacred river of the Hindus. From all parts of India pilgrims come to bathe in its waters, for they think that by this act they will obtain forgiveness for their sins.

Many, when very ill, are brought to the banks of the Ganges. To die there is the greatest desire of all Hindus, whether princes or peasants. The pilgrims often carry long poles with a bag suspended from the top in which are the ashes and bones of some relative thus brought to be thrown into the sacred river.

Benares, one of the most sacred of all places on the Ganges, is also one of the oldest of cities.

At the time of festivals its population is sometimes doubled by the pilgrims who come to bathe in the river, and to visit the temples.

The largest city in India is Calcutta. The finest modern city in Asia is Bombay.

Nearly every city in India is famous for its special ware. Beautiful rugs and shawls are woven, fine embroideries worked, wood and stone very skillfully carved, dishes, spoons, candlesticks, bells, idols, etc., in endless variety, are hammered out of brass and copper. These articles are all found in the native bazaars, where the Hindu merchants sit on the floor with their pipes beside them and their wares piled up around them.

Where is India? How large is it? Where are its highest mountains? What is its shape? Name its three chief rivers. What are raised in these river valleys? What is said of the forests and jungles? What are jungles? What is another name for India? What are the inhabitants of India called?

What is the complexion of the Hindus? How do they dress? Describe their houses. Describe a Hindu school. What is meant by caste? What can you tell about the wages of workingmen? About their food? What are some of the sacred animals of India?

What can you say about the Ganges River? Tell about Benares; Bombay.

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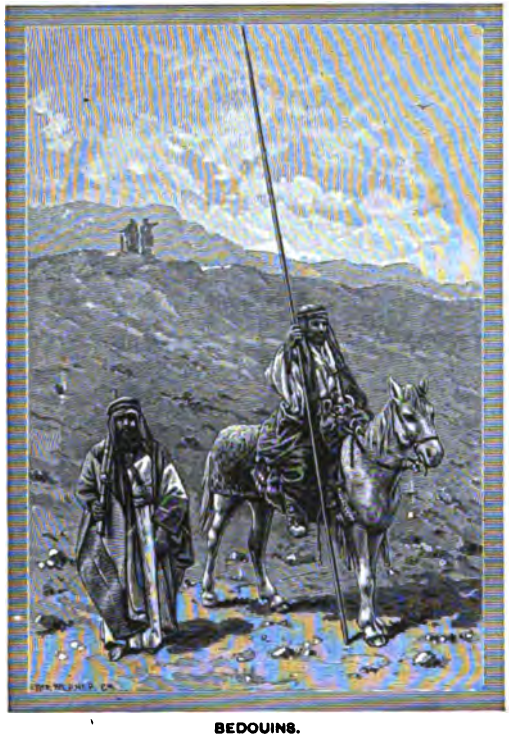

BEDOUINS.

94. Arabia and the Arabs.

The southwestern peninsula of Asia is called Arabia. Parts of it belong to the Turkish Empire.

The southwestern part of Arabia is fertile, and here the settled Arabs live in their cities and villages. It is in this region that the best coffee in the world grows.

Most of Arabia is a dry, desert country, where the Arabs can live only by moving with their herds from place to place. These wandering Arabs are called Bedouins, a word which means "Dwellers in the Desert."

Over this desert a hot, stifling wind called the simoon sometimes blows, and while it lasts the traveling Bedouins press their faces into the sand in order to breathe.

The Bedouins are divided into many independent tribes, and each tribe is ruled by a sheik. They have their summer and winter camping-grounds in oases of date-palms, where they live in tents and care for their herds of sheep, camels, goats, and horses. They cultivate a little rice and a few vegetables, and eat honey, locusts, and even lizards.

The Bedouins are dark-skinned and fierce-looking. Perhaps their habit of constantly frowning to protect their eyes from the glare of the sun gives them this fierce look. These desert

AN ARABIAN CAMP.

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wanderers are very ignorant and dishonest, and they rob and plunder whenever they have a chance.

The settled Arabs are temperate and hospitable, very kind to their little, black-eyed, dusky children, and even more kind to their beautiful, swift, Arabian horses, which are their great pride.

There are few countries where so little change has been made by the people as in Arabia. Descriptions which the Scriptures give us of the manners and customs of the people thousands of years ago are true of the Arabs at the present day.

The women do most of the work, attend to the herds, weave cloth for the tents, or

ARAB SHEIK.

grind corn in hand-mills; while the men lounge around smoking or drinking coffee, and the children, goats, and dogs all tumble happily about.

The camel caravans usually travel by night and rest by day. The lead-

CAMEL TRAPPINGS.

ing camel, always a majestic animal, decorated with a mass of colored tassels and jingling bells, carries his head proudly aloft.

Where is Arabia? To what country does it belong? What part is fertile? What is raised here? Who are the Bedouins? Tell all you can about them. What is the simoon? Tell about the Arabs of the villages.

95. Persia and the Persians.

Persia is another plateau of deserts and oases similar to those of Arabia. It is a very dry country, and the southern part is exceedingly warm.

Teheran is the capital, where the ruler of Persia, or Shah as he is called, lives.

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The small towns of Persia are much alike. They are built near a grove of date trees and contain a square fort, the sheik's house, a few other houses of stone, and many of mud or of mats made from date-leaf stalks. The finer houses are built around central courts, in which are lovely gardens, fountains, and sometimes large groves of fruit and shade trees. No windows look out upon the streets.

In lands like Persia, Arabia, or Turkey in Asia, where there are no good roads, and travel is mainly by saddle horses and beasts of burden, a palanquin takes the place of our carriage. It is made of reeds and wicker-work and is very light, and by no means so uncomfortable as you might think from the picture.

PERSIAN PALANQUIN.

The Persian is rather fine-looking, slender, dark-skinned, with dark hair and eyes and regular features. He delights in gay colors, and dresses in loose robes of cotton or of silk with a sash around the waist. His turban or lambskin cap, which is very high and without a brim, is a very important article; to receive a guest bare-headed would be considered very impolite. Next to the Chinese, the Persians are the most courteous people of the East.

Like most Eastern peoples, the Persians are exceedingly filthy; water is scarce and conveniences for its use are few. They are not a noble people.

The school buildings are open toward the street, and the schoolmaster can glance at the passers-by as well as at his pupils, who are seated on their heels in rows before him. The lessons which he teaches are reading, writing, rules of behavior, the Koran (which is their sacred book), the poets, and rhetoric.

From April to December, rain never falls in their country, and many occupations are carried on out of doors. In the streets the baker kneads and rolls his bread, presses the dough into thin, long sheets on his bare arms, and after the loaves are baked, lays them on a wall by his shop for sale. The bazaars are open and are very attractive with the wares, and especially with the embroideries for which Persia is so famous.

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About one-third of the Persians wander from place to place, having no permanent homes. Their food is easily prepared, for it consists mostly of sour milk and dates.

A PERSIAN.

Occasionally they eat brook trout, which abound in the mountain streams, or salmon from the Caspian.

Where is Persia? In what respects is it like Arabia? What is the capital?

How are the small towns of Persia usually built? What is a palanquin?

Describe the Persians. Tell what you know about the Persian schools.

What occupations are carried on in the streets of Persian towns?

96. Turkey and the Turks.

The Empire of the Turks includes large provinces in Asia and Africa, as well as the greater part of the Balkan Peninsula in Europe.

The peninsula in Asia which extends between the Black and the Mediterranean Seas belongs to the Turks, and also two long narrow belts of land, one along the Red Sea and another stretching part way down the Persian Gulf. Two large rivers, the Tigris and the Euphrates, flow through the southeastern portion of the Turkish Empire.

The summers in Turkey are very hot, and the winters mild, hence the olive and many other kinds of fruit grow in great abundance.

Here, as well as in India and Persia, there are large rose gardens; from the rose petals attar of roses is made.

The roses are gathered before the morning dew is gone, and are then distilled. It takes about four thousand pounds of rose petals to make one pound of this oil.

Smyrna and Damascus are the largest cities in Asiatic Turkey. From Smyrna come some of our beautiful rugs and carpets. Damascus is the center of a large caravan trade. In that country there are no good roads, and all merchandise is carried from place to place by caravans.

The famous country of Palestine lies along the Mediterranean coast. Most of the events mentioned in the Bible occurred in Palestine. Many pilgrims come to Jerusalem every year.

What have you learned about Constantinople, the capital of Turkey?

There are many beautiful churches or mosques in Turkish cities, and on the balconies of their tall spires, a man appears several times a day to call the people to prayer. When his sad, wailing voice is heard, all the

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people, no matter what they may be doing, prostrate themselves on the ground with their faces toward their holy city of Mecca, and repeat the prayers which have been taught them.

CALLING TO PRAYER.

The homes of the poor are very wretched, but the wealthy have luxurious ones. The floors are covered with soft, thick carpets, and there is a divan, a kind of high seat, running around the wall of the room upon which are mattresses and many soft, beautiful cushions. Here the Turk likes to lie with a pipe in his mouth. Near by, in winter, there is a brazier to keep him warm. At meal-time he sits cross-legged on the carpet, with his face toward the east. The harem, or apartment of the women, is separated by a gallery from the rest of the house.

On the street the women always hide their faces behind long black veils.

The Turk wears a turban, or a fez, a cap shaped like a tumbler, wide trousers gathered at the ankle, and loose robes of silk fastened at the waist with a girdle.

There are many gypsies in this part of Asia.

GYPSIES AND THEIR HOME.

QUESTIONS.

About how far is the Black Sea from the Mediterranean? From the Caspian?

Where is Turkey? What other country is partly in Europe and partly in Asia? What part of Asia belongs to Turkey? To Russia? What large rivers in Asiatic Turkey? Which are the largest cities of Asiatic Turkey?

Where is Damascus? Palestine? Jerusalem? For what are these places noted?

What are caravans? Why do merchants travel in caravans?

Describe the homes of the rich Turks; their dress. What is said of the calls to prayer?

What can you say of the character of the Turks? Of the climate and the plants of Turkey?

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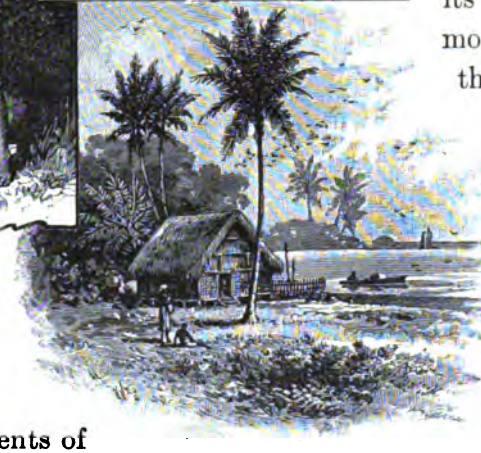
JAVANESE CHILDREN.

BANYAN TREE.



SCENE IN JAVA.

97. The East India Islands and the Malay People.

Between the two continents of Asia and Australia lies the largest and most fertile group of islands in the world. The group is called the East India Islands. They have a hot, moist climate, and their products and animals are like those of Southern Asia.

The largest island is Borneo, the third island in the world in size.

The people of these islands, and also of the Malay Peninsula, the long, narrow peninsula of Indo-China, belong to the Malay or brown race. The people of this race have brown, flat faces, projecting cheek bones, and very black hair. Some of them are very intelligent, while others are among the lowest of savages.

Java is the most important of the many islands, for its people are the most numerous and the most highly civilized, and its products are the best. From this island come Java coffee and tea; sugar and rice are also exported.

The villages are almost hidden by the luxuriant vegetation, sago-palms, banana plants, and cocoanut trees. The tidy one-story houses are made of bamboo and thatched with palm leaves and wild grass. In front there is often a wide open veranda hung around with bird cages, and this is the sitting-room and workshop. Within the house are the parlor and sleeping-rooms, and back of these is the kitchen, which consists of only a roof supported by poles.

The men and women dress in very bright colors. The cotton cloth used is made by the women with their spinning-wheels and looms. The children often go wholly naked, their heads being protected from the sun by an umbrella or perhaps by only a banana

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leaf. The Javanese do not cut their hair; the men twist it around upon the crown of the head, while the women wear it in a large knot at the back of the head.

Many of the natives eat nothing but rice, fish, and fruits, except upon great festal occasions. They have as many kinds of bananas as we have of apples. Cocoanuts are eaten when green, before the white part becomes hard. The water contained in the nut is their common drink.

Notice in the picture of the banyan tree how many shoots have been sent down from the branches and have taken root in the soil. Sometimes this tree covers several acres.

Multitudes of birds' nests, built by a kind of swallow, are sent from this island to China; the Chinese think them delicious food.

Where is the Malay Peninsula? Where are the East Indies? Where are the West Indies? Name three islands of the West Indies. Three of the East Indies. What continents do the East Indies lie between? The West Indies? These islands seem like stepping-stones between the continents. What other series of islands connecting continents can you find?

Describe the Malays.

Tell what you can about Java; about the villages and houses; the dress of the men and women; the food of the people.

What singular food is exported from Java to China?

REVIEW QUESTIONS.

What can you say of the size of Asia?

In what five divisions may it be studied?

What countries are in each of these divisions?

Name three southern peninsulas. Name the western peninsula. Name the two eastern peninsulas.

Name two rivers of China.

What important islands east of Asia? Name three islands of the East Indies, and tell something about each.

What is the sacred river of India? The sacred city?

Where are the highest mountains of the world?

What is the land of the white elephant? What city is the Venice of the East?

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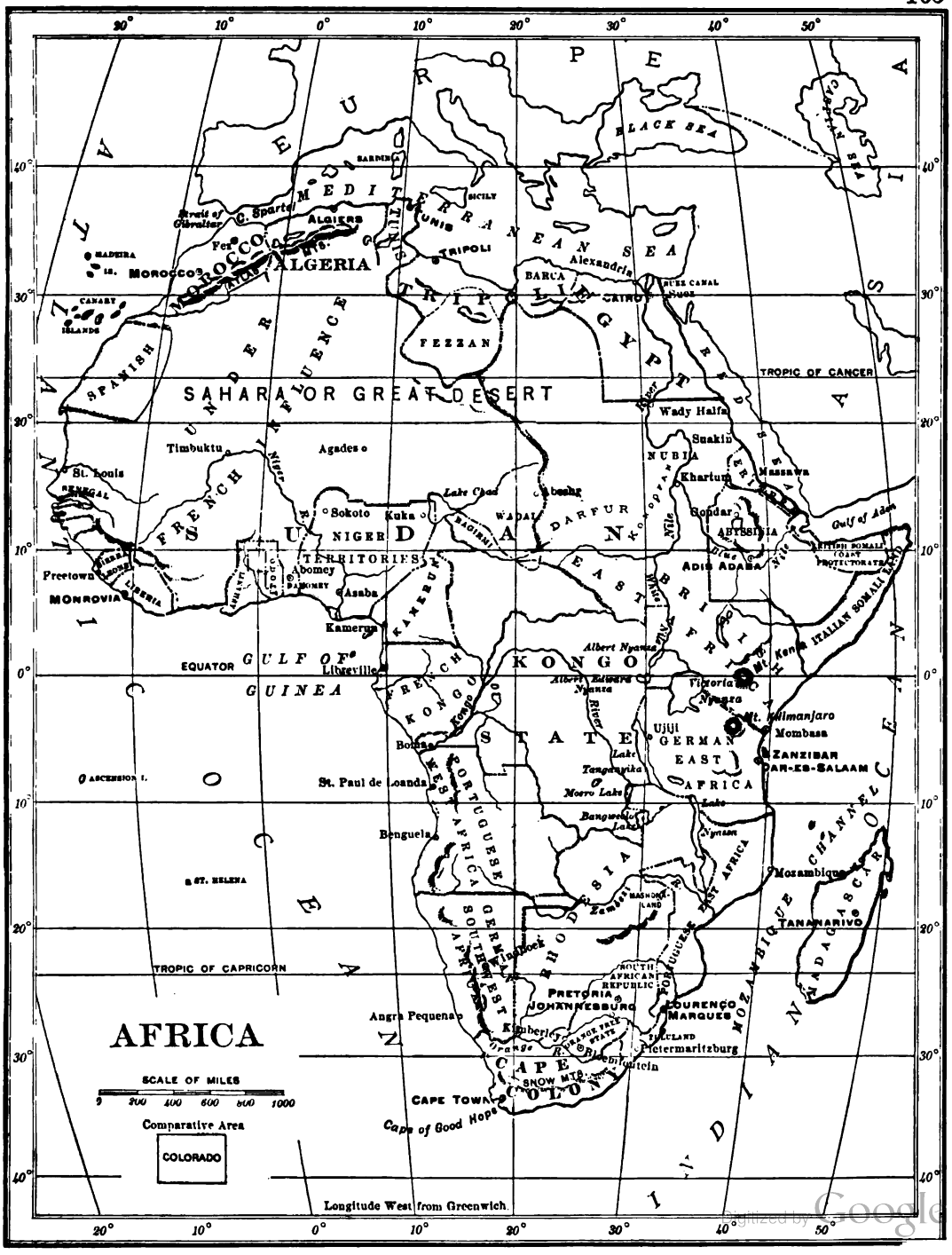

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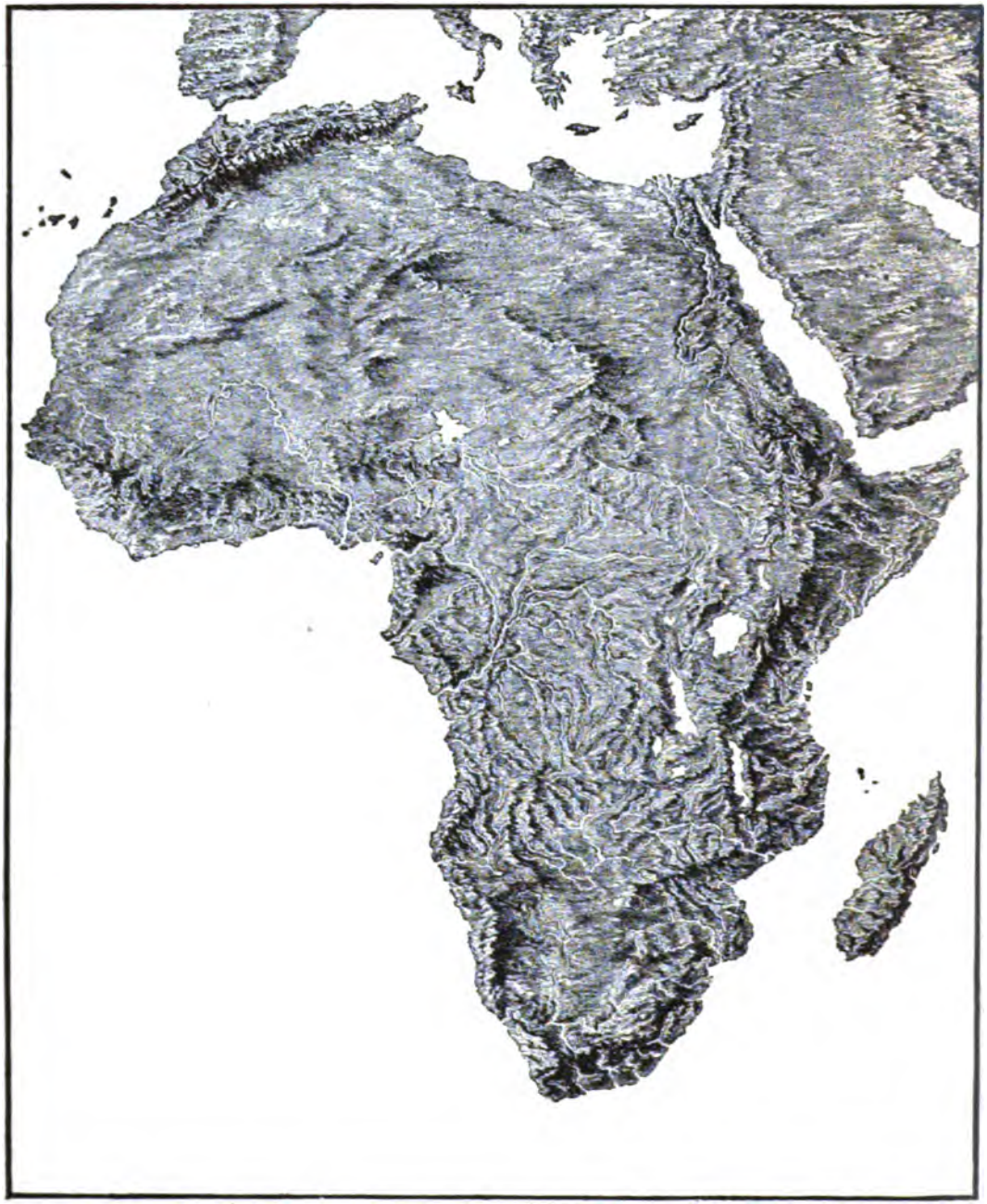

RELIEF MAP OF AFRICA.

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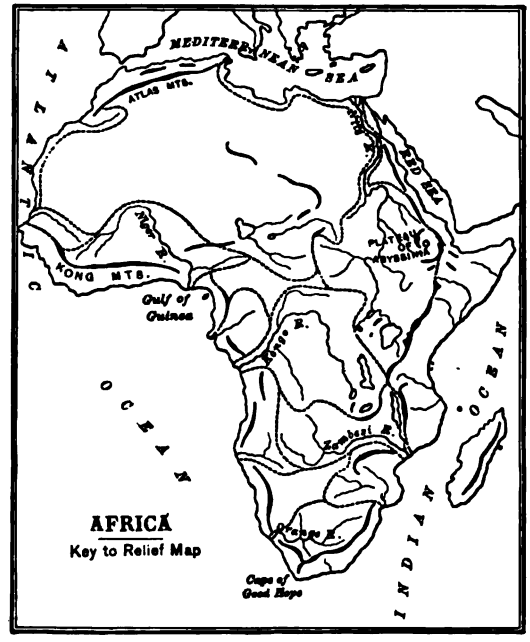
AFRICA.

98. Relief, Climate, and Products.

Africa is the second continent in size. What connects it with Asia? By what waters is it surrounded? Its greatest length is five thousand miles, and its greatest width almost as much. Look at the map of Africa and see how regular its coast line is. It has few harbors.



AFRICA
Key to Relief Map

Africa has its chief mountain system on the east. Beginning with the plateau of Abyssinia it extends to the Cape of Good Hope. Its highest peaks are near the equator. On the west and north are other mountains.

There is in Africa no vast, low plain extending from north to south, as in the Americas. In the southern half of the continent the space between the highlands near the coasts is filled with an elevated tableland, or plateau. On the northern border of this plateau there is a steep descent to the low lands of Northern Africa. Examine the map and decide which are the chief river systems of Africa. Describe three of these systems as to location and extent.

The interior of Africa is composed of vast plateaus that descend by terraces to the coast. Upon the edges of this plateau are several mountain ranges, and in the central region rise the chief rivers of Africa.

Into the Mediterranean flows the

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Nile; into the Atlantic Ocean flows the Kongo, which, next to the Nile and the Amazon, is the largest river of the world. It carries such a flood of water that it keeps the surface of the sea fresh for many miles. The Niger, now navigated by British steamers, also enters the Atlantic. Where is the Zambezi?

Almost all Africa lies in the torrid zone, and it therefore does not have the extremes in temperature or the varieties of products which are found in Europe or Asia. Coffee, cocoa, cereals, dates, cotton, and india-rubber, salt, gold, copper, diamonds, and ivory are the chief exports.

99. Animals.

When people cross the great desert of Africa, they travel with camels. What have you learned about this animal?

HIPPOPOTAMUS.

RHINOCEROS.

ANTELOPE.

Wild animals are more numerous in Africa than in any other continent. The wild elephant and the huge hippopotamus are hunted for their ivory.

The forehead of the African elephant has a different shape from that of the Asiatic elephant, and its ears are much larger. The African elephant is seldom tamed and made to work as the Asiatic elephant is.

OSTRICH.

AFRICAN ELEPHANT. ASIATIC ELEPHANT.

GIRAFFE.

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There are also vast herds of antelopes of many kinds; prettily striped zebras; a great thick-skinned animal called a rhinoceros; the tallest of animals, the giraffe; and the largest of birds, the ostrich.

ZEBRA.

Like the elephant, the hippopotamus and the rhinoceros have thick hides without hair, and they live upon herbs and plants and leaves of trees.

The giraffe feeds upon leaves that grow high up on trees, and so it needs a very long neck. It is not a beautiful animal, but its coat of light fawn color, covered with brown spots, is very pretty.

ANT-HILL.

In Africa there are also the fierce animals of the forests — the lions and panthers, or leopards — that lie in wait for prey.

HYENA.

JACKAL.

The jackals and hyenas live chiefly upon carrion,[1] but when very hungry they enter villages at night and carry off domestic animals.

[1] Carrion, dead animals.

In Africa are many large serpents and crocodiles that resemble the alligators of our southern states.

CROCODILE.

There are many kinds of apes in the forests. Among them are the chimpanzee and the gorilla, which looks much like a human being, and is found only in Africa.

A great plague of Central and Southern Africa is a kind of fly (tsetse fly), whose bite kills horses and sometimes cattle.

CHIMPANZEE.

GORILLA.

Red and white ants abound in a portion of this region. The white ants build great mounds that contain many tons of earth.

TSETSE FLY.

On this page is a picture of an ant-hill. Sometimes these are thirty or forty feet in

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diameter and ten or fifteen feet high. One of them would fill your schoolroom.

Which of the animals of Africa are also found in Southern Asia?

Are the animals of Africa found in Northern Asia?

100. People.

This vast continent is divided into many regions, over which several European nations have gained control. But a large part of the continent is occupied only by the native tribes.

It is thought that there are two hundred million people in Africa. In what parts are the most people?

Ignorant people who live in far-off countries think that all Americans are Indians, and we should make a similar mistake if we were to suppose that all Africans are negroes.

SUDANESE MOTHER AND CHILD.

Of the people in Africa, one third belong to the white race, another third are of a mixed race, and the various tribes of the black race make up the remaining third. These tribes differ greatly in size, strength, character, and intelligence. Some are among the smallest of the human race, others among the largest and strongest. Some live wholly naked in caves and holes, and subsist upon roots and small animals. Others live in settled villages and cultivate their farms; they make iron and copper utensils, spears, axes, knives, needles; they spin, weave, and make nets.

These tribes are alike in having black, woolly hair, dark eyes and skin, broad, flat nose, thick protruding lips.

Hidden away in the forests of Central Africa are the smallest of all people, the Pigmies. The men are about four feet one to eight inches in height, are well formed, and their whole bodies are covered with short, coarse hair. They are fierce, brave, and cunning.

They do not live in villages, but wander about the forests in small bands. They dig pitfalls, which they carefully cover with boughs and leaves, and then climb trees and watch for their big game, the wild elephant. When an elephant has fallen into their pit, they kill him with spears, and then build their little huts around so that they can stay there as long as the elephant lasts them for food.

When one of their number dies, they eat his body. The captives taken in war-

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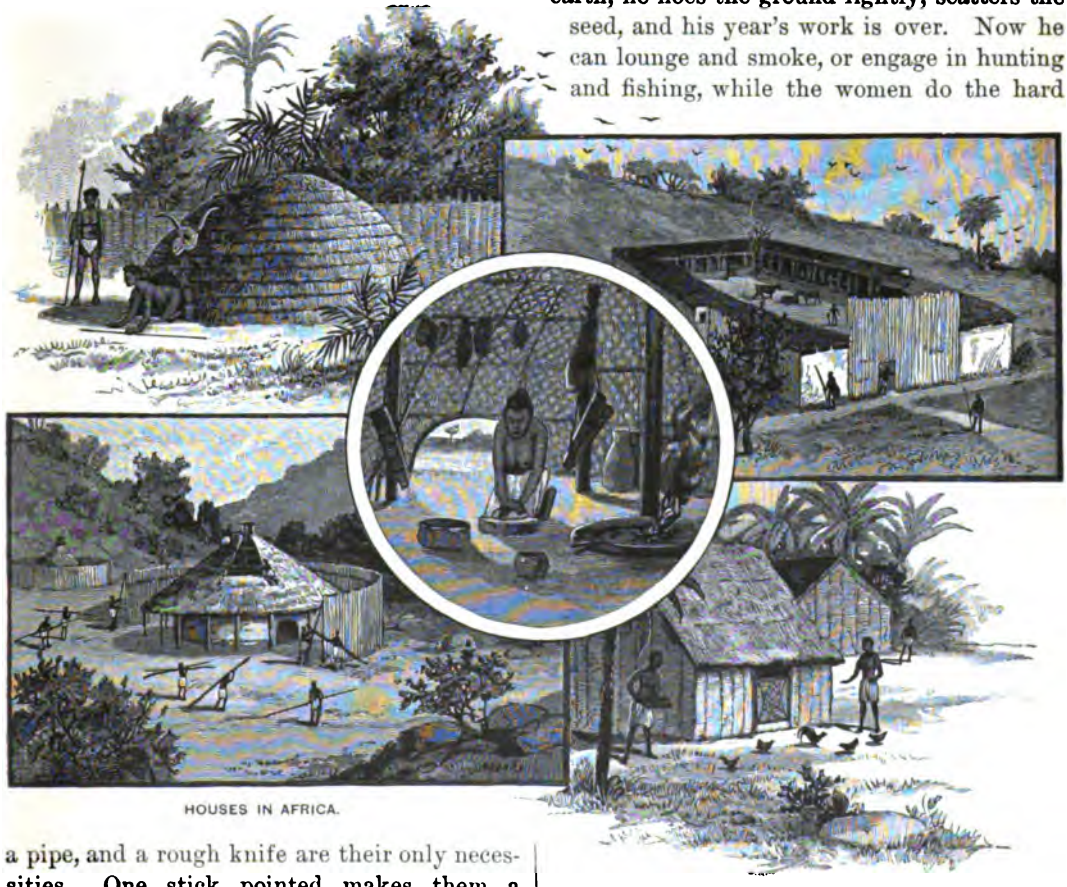
fare are also killed and eaten. Such savages who eat human flesh we call cannibals.

In Central Africa are many other tribes, who are always at warfare with one another. They are a thoughtless and contented people, for their wants are few. Bow and arrows, a pipe, and a rough knife are their only necessities. One stick pointed makes them a spear, two sticks rubbed together start a fire, several sticks tied together and covered with leaves make them a hut. The bark peeled from the boughs furnishes their strip of clothing around the waist.



HOUSES IN AFRICA.

For food they live upon wild fruits and herbs, and upon millet seed, which they cultivate. The only work which a man does during the year is to get his field of millet started. He chops off all the boughs from the trees which cover his future field, and sets them on fire as they lie on the ground. After a rain has washed the ashes into the earth, he hoes the ground lightly, scatters the seed, and his year's work is over. Now he can lounge and smoke, or engage in hunting and fishing, while the women do the hard work. They pound the millet seed in a mortar, mix it with water, and then the tasteless dough is ready to eat. Often the negro warrior scorns to sow the seed himself, and his wife, with the seed in a basket upon her head, a hoe over her shoulder, and a baby tied to her back, goes to this labor in the field.

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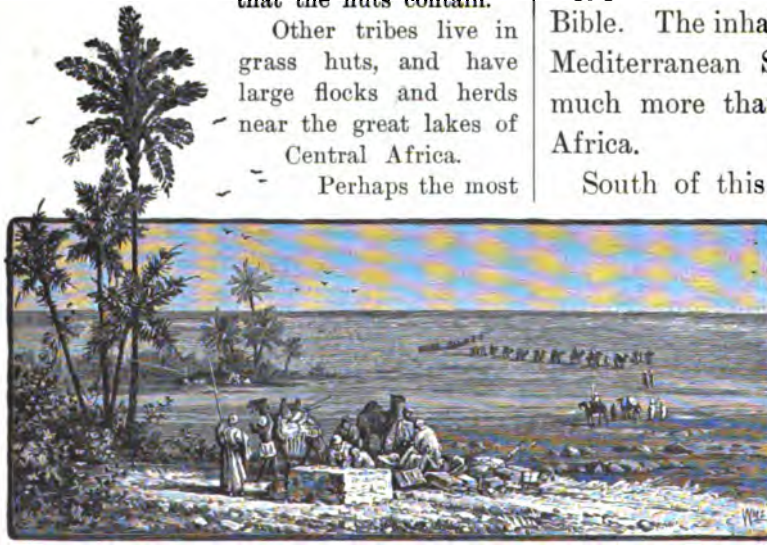
Many villages have their huts built in a circle. The huts themselves are round. The framework of flexible poles is tied together at the top with "monkey-rope," a stout vine that stretches from tree to tree, and reed or bark thatching covers the poles. In the center of this large circle of huts is the house for public debates, or "palaver-house" as it is called.

Other villages have rectangular-shaped, flat-roofed houses, built on both sides of a wide street. Sometimes the huts are dome-shaped, and decorated within with many-colored beads. A few mats, baskets, earthen pots, and weapons are all that the huts contain.

Other tribes live in grass huts, and have large flocks and herds near the great lakes of Central Africa.

Perhaps the most cruel of the native Africans are those known as the Dahomey tribe. They are constantly making raids upon their neighbors. In their army are many women soldiers. The court of the king is paved with human skulls, and his palace walls are ornamented with them.

THE NILE.



AN OASIS IN THE DESERT.

101. Divisions.

In the northeastern part of Africa is the famous river Nile and the land of Egypt, about which we read in the Bible. The inhabited region along the Mediterranean Sea resembles Europe much more than it does the rest of Africa.

South of this inhabited region is a plain which is nearly as large as Europe and is almost wholly barren. This plain is called the Desert of Sahara. You have learned that Arabia and Persia are for the most part desert lands. There is a great desert belt stretching from the Atlantic Ocean

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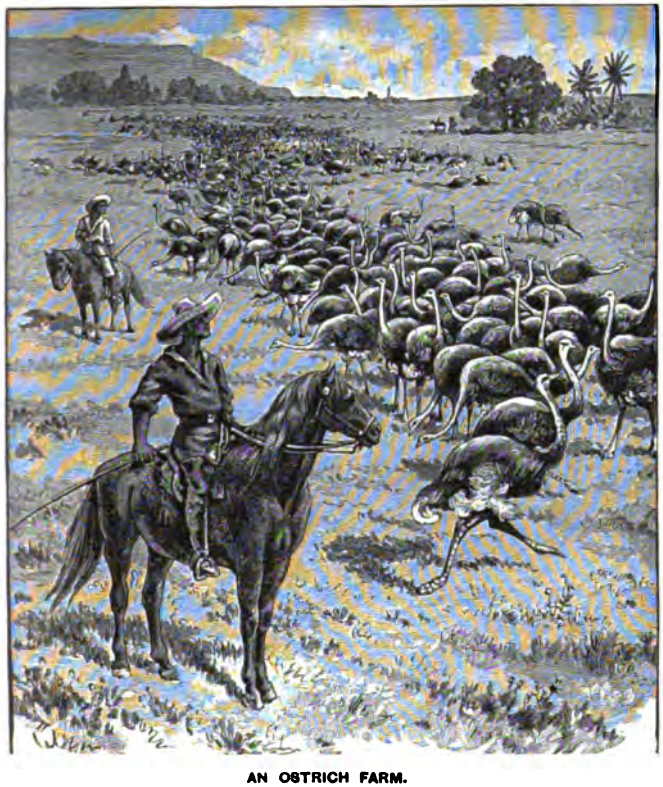
to the central highlands of Asia. What waterways break this desert?

The Desert of Sahara consists of a vast sandy and stony tableland. Here and there are green places called oases, where the date-palm grows, and where rice, corn, and barley are sometimes cultivated. There are routes across the desert that are traveled by caravans of camels. These caravans carry ostrich feathers, gold dust, and ivory northward to the ports on the Mediterranean, and take back manufactured goods, such as cotton, cutlery, and all kinds of trinkets for the natives in the interior.



AN OSTRICH FARM.

In the southern part of Africa is Cape Colony, which belongs to the British Empire.

In this part of Africa immense flocks of sheep are raised. There are extensive ostrich farms.

The little ostrich chicks are very pretty, with their large eyes and plump little bodies. At five years old they are fully grown, and are very awkward, queer-looking specimens after their feathers have been plucked.

There are copper mines here, worked at a great depth. Valuable diamond fields are also worked. A few railroads have been built to these mines, but the chief means of travel is by great canvas-covered wagons drawn by oxen.

102. Egypt and the Egyptians.

To one looking at the map of Africa, Egypt seems to occupy a large space in the northeastern part, but

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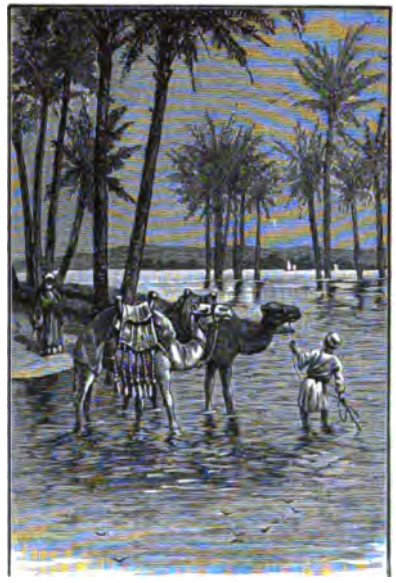

INUNDATION OF THE NILE.

the real Egypt is only the narrow valley of the river Nile with its delta. East and west of this river are desert regions inhabited only by a few wandering tribes. An ancient historian called Egypt "the gift of the Nile," for only where the Nile overflows is the land fertile.

In Egypt rain is almost unknown, and for a long time it was a great mystery why this river should overflow in summer. The Nile is one of the longest rivers in the world, however, and its waters come from a large highland basin close to the equator, where there is an abundant rainfall in the winter months. It takes several months for this water to reach lower Egypt, and then the country presents a strange sight. The towns and villages look like little islands in the midst of the waste of waters, and the delta of the Nile is one vast lake. When this water falls, it leaves a coat of rich soil over the land, which makes it very fertile. Then the Egyptians scatter their seeds of wheat, rice, corn, barley, sugar-cane, cotton, indigo, and tobacco, from which they gather abundant harvests.

For many centuries before Christ, this fertile Nile valley was filled with cities and palaces, vast temples and magnificent tombs. The land is often spoken of as the "cradle of civilization." Here writing, astronomy, math-

ON THE NILE.

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ematics, medicine, chemistry, architecture, sculpture, were first known.

OBELISK IN CENTRAL PARK, N.Y.

If you have been in New York's great park, you have seen a tapering monument covered with strange-looking marks. This monument, called an obelisk, came from Egypt and is about three thousand years old.

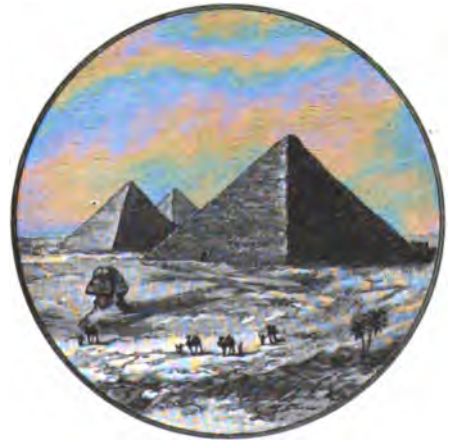
Egypt has many very old monuments. There are seventy great pyramids like those in the picture. These are huge piles of stones fastened together with cement that is harder than the stones themselves. These pyramids are thousands of years old and are supposed to be royal tombs. The Great Pyramid covers more than thirteen acres.

Not far from one of the pyramids is the Sphinx, an immense stone figure which the Arabs call "The Father of Terror." It has the body of a lion and the head of a man.

The capital of Egypt and the largest city in Africa is Cairo. Some of its streets are so narrow that two camels can scarcely walk side by side.

Besides the camels and the donkeys there are carriages preceded by a runner who waves a white wand to clear the way; Arabs leading their horses; women riding, whose eyes only can be seen gleaming from their white masks; women on foot with naked children sitting astride their shoulders; water-carriers with goatskins filled with water; or girls with water-jugs poised on their heads; gayly dressed Greeks; Turks in their flowing robes; and men and children begging for bäksheesh, or money.

Camels and donkeys are everywhere seen in Cairo. The donkeys have bright red saddle-cloths, and there are many jingling coins around their necks. The Arab donkey-boys, who run along behind to hurry the donkeys on with a stick, can run for miles without getting out of breath. They are clad in blue



PYRAMIDS AND SPHINX.

gowns, or in those which were once white, and they have bright-colored handkerchiefs wound around their heads.

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In the country, among the palm trees and orange trees, are many mud hovels with only a hole in the roof for a chimney, and another one in the wall for a window. These hovels serve as habitations not only for human beings, but also for dogs and goats, pigs and chickens. The Egyptians may be seen

PLOWING IN EGYPT.

plowing with a pointed stick drawn by camels, or by a camel and donkey yoked together, or perhaps by a camel and a cow. Creaking wheels are slowly turned to raise the water from the river just as was done ages ago.

Where is Egypt? What part is fertile? Why does the Nile overflow? What appearance does the overflow give lower Egypt? How does the Nile benefit Egypt? What crops do the Egyptians raise in the valley of the Nile?

Why is Egypt called the "cradle of civilization"? For what purpose is it supposed the pyramids were built?

Where is the capital of Egypt?

What may be seen in the streets of Cairo?

What may be seen in the country on either side the river?

REVIEW QUESTIONS.

Give the position of Africa. What are its bounding waters? What isthmus connects it with Asia? How large is Africa? Describe the relief of Africa. Name its four principal rivers.

What famous river and country in the northeast of Africa?

Where is the Desert of Sahara? How large is it? Describe it. With what other deserts is it nearly connected?

What British possessions in Southern Africa? What animals are extensively reared here? What mines are here?

In what zone is a large part of Africa? What are the products of the valleys? Are all the people of Africa negroes? What different races are to be found in Africa? What different degrees of civilization among the blacks?

What can you tell about the Pigmies? About the people in Central Africa? Describe the villages. Tell about Dahomey.

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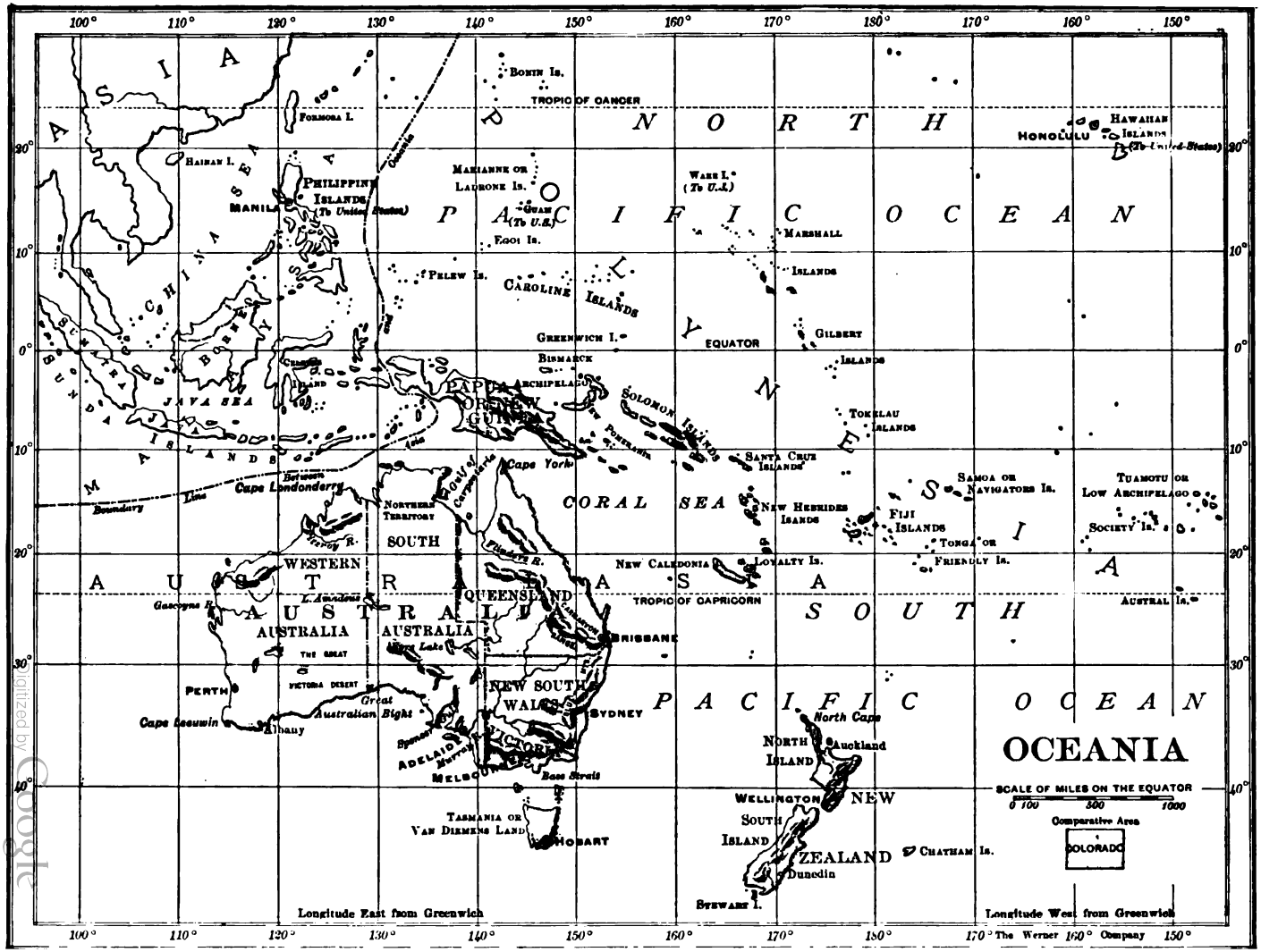

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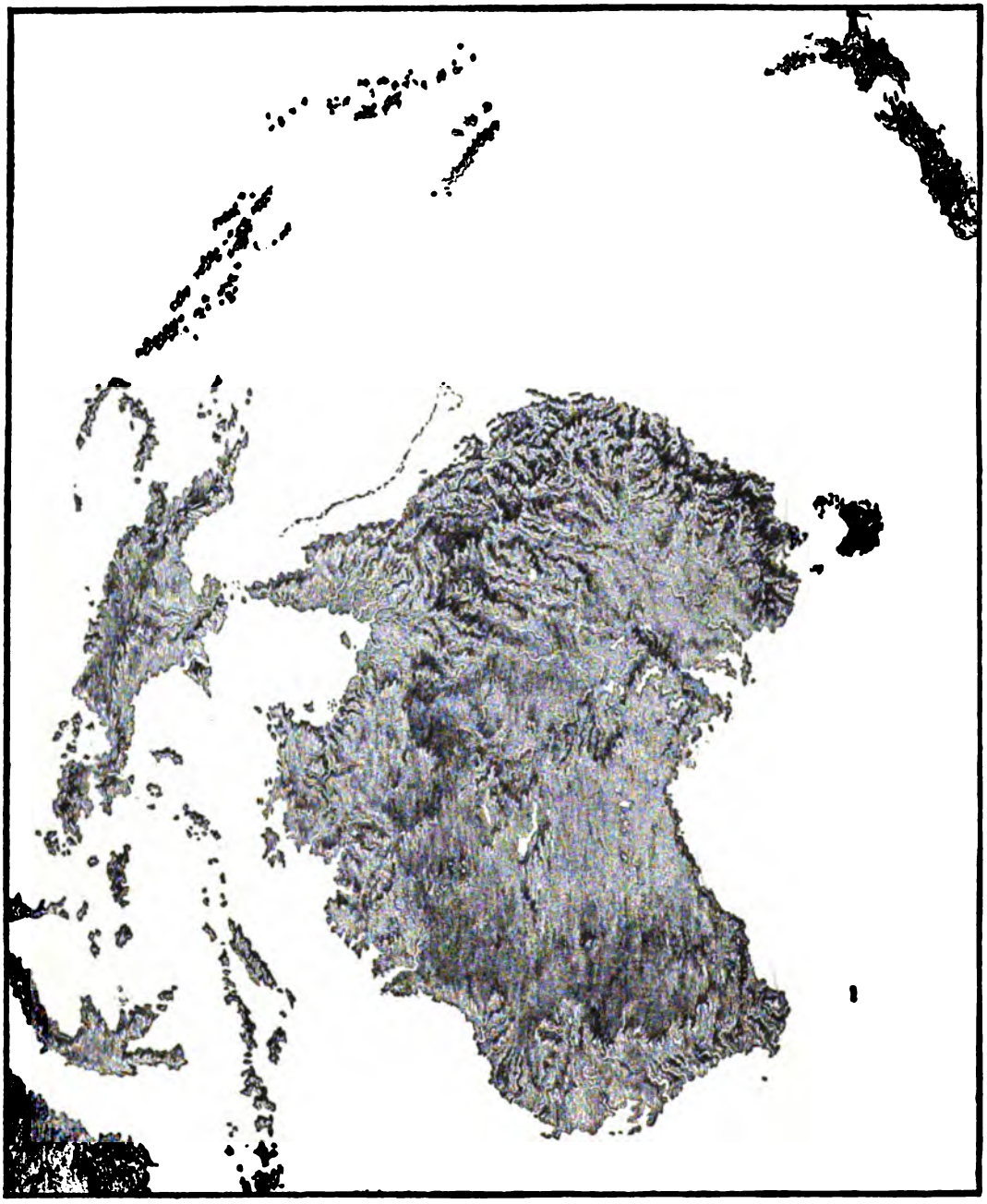

RELIEF MAP OF AUSTRALIA.

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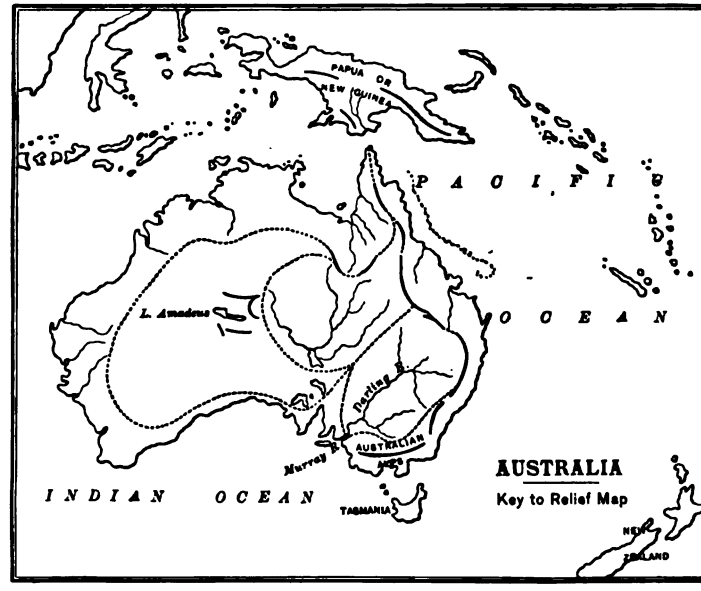
AUSTRALIA.

103. Relief, Climate, and Products.

Australia is the smallest of the continents. It is about the size of the United States.

By what oceans is it surrounded? What large gulf on the north and what large bay on the south? What islands lie between it and Asia? In what zones does it lie? Which are the warmer, its northern or its southern coasts?



This land has been called the New World of the Eastern Hemisphere, because it was not known to the people of Europe till long after our country was discovered. The English people claimed it because they discovered it, and at first they used it as a great jail, to which they brought their prisoners and left them. After gold was discovered among the hills, the free people of Great Britain came over in great numbers and founded flourishing colonies.

Besides the Europeans there are now many Chinese and a few thousand native black people in Australia. These natives are lighter in color than the Africans. They are very ignorant and have no settled homes.

Australia has its chief mountain system on the east and southeast, and other mountains on the west and northwest. Between these mountains is a broad, low plain; it is mostly a

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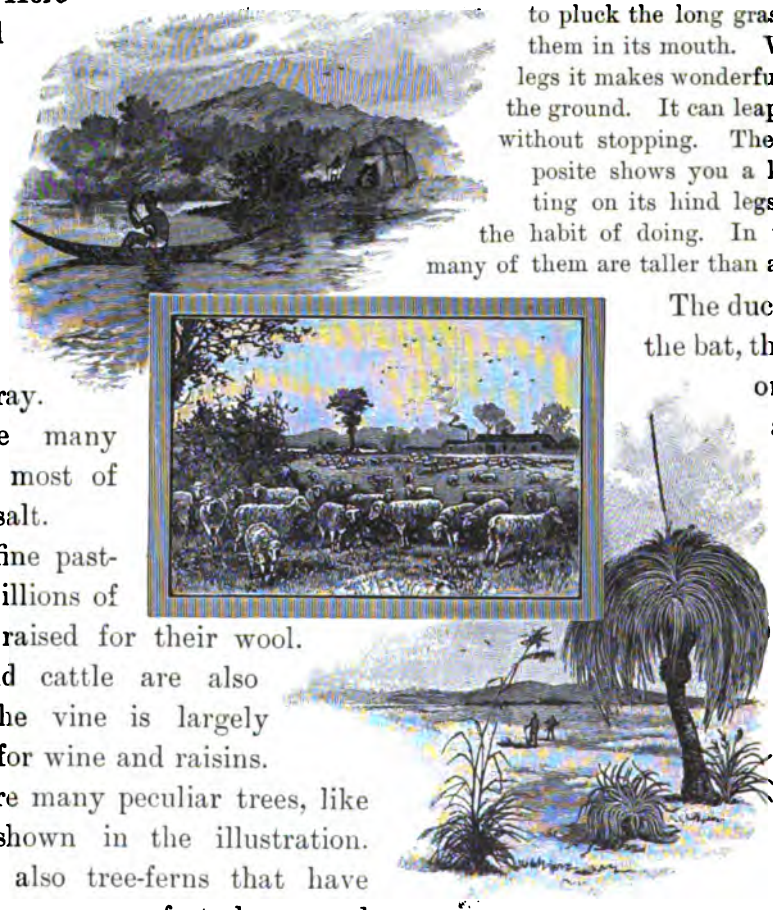
desert from lack of moisture, and is but little known.

The eastern region is the most productive and populous part of the continent. Here are found rich mines of coal, besides gold and other precious metals. The only large river is the Murray. There are many lakes, but most of them are salt.

On the fine pasture land millions of sheep are raised for their wool. Horses and cattle are also reared. The vine is largely cultivated for wine and raisins.

There are many peculiar trees, like the one shown in the illustration. There are also tree-ferns that have leaves six or seven feet long, and grow as high as fifty feet.



SCENES IN AUSTRALIA.

104. Animals.

Many of the animals of Australia are such as are not found on the other continents. The largest animal is the kangaroo.

The kangaroo has short and small fore legs, but long and powerful hind legs. It uses its fore paws almost like hands to pluck the long grasses and put them in its mouth. With its hind legs it makes wonderful leaps along the ground. It can leap many miles without stopping. The picture opposite shows you a kangaroo sitting on its hind legs, as it is in the habit of doing. In this position many of them are taller than a man.

The duck-mole and the bat, the wild dog, or "dingo," are animals peculiar to this continent.

The duck-mole swims in ponds and quiet rivers and also easily climbs trees near the water. It digs a burrow slanting upward, many feet long in the bank, where it makes its nest of dried grasses and leaves.

Bats are covered with hair, not with feathers as birds are, and their wings are quite unlike those of birds. The wings consist of very thin skin that is stretched over

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long, thin bones. In our country bats sleep through the winter, hanging by the claws of their hind feet, heads downward, in some hollow tree or from some beam in a barn. In Australia, however, where there is no winter,

DUCK-MOLE.

BAT.

the bats do not have a long sleep. The bats there are much larger than those in our country. They always hide themselves in the daytime and fly about at dusk or at night.

The dingo is the only kind of dog that is found both wild and domesticated. The wild dingo is very fierce, and is a great enemy of the sheep for which Australia is famous.

Crocodiles, lizards, and snakes live in the rivers.

LYRE-BIRD.

Australia has birds of beautiful plumage. The lyre-bird is one of the most beautiful. This shy bird is about the size of a small fowl, and makes its home in the dense thickets.

105. Australian Colonies.

Australia belongs to the British Empire. It is divided into several colonies.

New South Wales is a flourishing colony. Strangers who visit its fine capital, Sydney, say that it seems just like an English city, and that it is difficult to realize they are many thousands of miles from England.

Victoria is a small but very important colony. Its capital is Melbourne, the largest city in Australia. Fifty years ago the wild kangaroo had its

KANGAROO.

DINGO.

home where this beautiful city now stands. It has grown very rapidly.

South of Victoria is the island of Tasmania, which forms another Australian colony.

Where is Australia? About how far is it from Asia? Is it a continent or an island? How large is it? To what nation does it belong? Which is the more fertile portion? Where are the gold mines? Where are the sheep ranches? Name the three largest cities south of the equator.

Name the eastern provinces. What is said of New South Wales and its capital?

Which is the most flourishing province? Which exports most gold? What have you learned about Melbourne?

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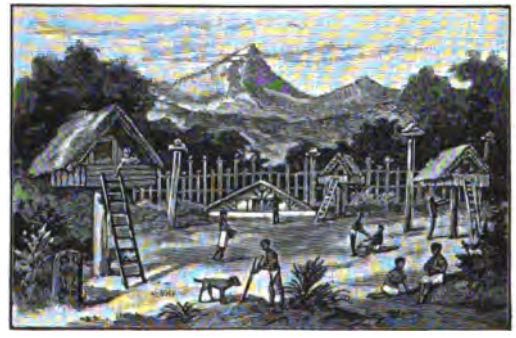
106. New Zealand, New Guinea, and Hawaii.

New Zealand. — If a straight line were drawn from the British Islands through the center of the globe, it would come out on the other side near a group of islands called New Zealand. The New Zealanders are therefore said to be the antipodes of the English. What does "antipodes" mean?

These islands are called "The Britain of the South," for the climate there is much like that of the British Islands, though less changeable. New Zealand is one of the many possessions of Great Britain.



SCENE IN NEW ZEALAND.

There are many hot lakes and springs, and the natives who live near them cook their food by placing it in the hot water, or by covering it with hot earth.

Most of the people now on these islands are British. They export to other countries wool, tallow, hides, sheepskins, preserved and frozen meats, and dairy products. They also mine gold and coal.

New Guinea. — North of Australia is the island of New Guinea, the largest island in the world, except Greenland. It is divided among England, The Netherlands, and Germany.

Scattered over the Pacific are a great number of other islands. Some of them are called *atolls*, consisting of a reef of coral that surrounds a lagoon.

Hawaiian Islands. — The Hawaiian Islands are in the Pacific Ocean, nearly on the line separating the torrid from the north temperate zone.

The climate is pleasant and healthful. The soil is fertile. Great quantities of sugar are produced.

REVIEW QUESTIONS.

Where is New Zealand? Why is it sometimes called "The Britain of the South"?

What are the exports of New Zealand?

Where is New Guinea?

To what nations does it belong? Where is the Gulf of Guinea? Where is Guiana?

Which are the three largest islands in the world?

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APPENDIX.

PRONUNCIATION OF GEOGRAPHICAL NAMES.

Key: fat, fāte, fär, fâll, fàst, fāre; met, mēte, hér; pin, pine; not, nōte, möve, nôr; tub, mūte, púll; leisure; thin, then.

Abyssinia	ab-i-sin′-i-ä	Assuan	äs-swän′	Borneo	bôr′-nē-ō
Adelaide	ad′-e-lād	Asuncion	ä-sön-sē-ōn′	Bosporus	bos′-pō-rus
Adirondack	ad-i-ron′-dak	Athens	ath′-enz	Bothnia	both′-ni-ä
Adriatic	ā-dri-at′-ik	Atlantic	at-lan′-tik	Brahmaputra	bräh′-ma-pö-tra
Afghanistan	af-gan-is-tän′	Australia	âs-trā′-liä	Brazil	bra-zil′
Africa	af′ri-kä	Austria-Hungary	âs′-tri-ä-hun′-gā-ri	Brazilian	bra-zil′-yán
Alabama	al-a-bä′-mä	Azores	a-zōrz′	Bremen	brem′-en
Alaska	a-las′-kä	Azov	ä′-zof	Brisbane	briz′-bān
Albany	âl′-ba-ni			British	brit′-ish
Albert Nyanza	al′-bért nyan′-zä	Baffin	baf′-in	Brooklyn	brůk′-lin
Aleutian	al-e-ö′shi-an	Bahamas	ba-hä′-mäz	Brussels	brus′-elz
Alexandria	al-eg-zan′-dri-ä	Bahia	bä-ē′-ä	Budapest	bö′-dä-pest
Algeria	al-jē′-ri-ä	Baikal	bī′-käl	Buenos Ayres	bwā′-nōs-ī′-res
Algiers	al-jērz′	Balkan	bâl′-kan′	Bukharest	bö-ka-rest′
Alleghany	al′-ē-gā-ni	Balkash	bäl-käsh′	Bulgaria	bul-gā′-ri-ä
Altai	äl-tī′	Baltic	bâl′-tik	Burma	bėr′-mä
Amazon	am′-a-zon	Baltimore	bâl′-ti-mōr		
America	a-mer′-i-ka	Baluchistan	bal-ö-chis-tän′	Cadiz	kā′-diz
Amsterdam	am′-stėr-dam	Bangkok	bang-kok′	Cairo	kī′-rō
Amur	ä-mör′	Bangweolo	bang-wē-ō′-lō	Calais	kal′is (F. kä-lā′)
Andes	an′-dēz	Barcelona	bär-se-lō′-nä	Calcutta	kal-kut′-ä
Antarctic	ant-ärk′-tik	Batavia	ba-tā′-vi-ä	California	kal-i-fôr′-ni-ä
Apennines	ap′-e-nInz	Belfast	bel′-fäst	Cambridge	kām′-brij
Appalachian	ap-a-lach′-i-an	Belgium	bel′-ji-um	Canada	kan′-a-dä
Arabia	a-rā′-bi-ä	Belgrade	bel-grād′	Canary	ka-nā′-ri
Arabian	a-rā′-bi-än	Benares	be-nä′-rez	Cancer	kan′-sér
Aral	ar′-al	Bengal	ben-gâl′	Candia	kan′-di-ä
Ararat	ar′-a-rat	Bering	bē′-ring	Canton	kan-ton′
Archangel	ärk-ān′-jel	Berlin	bėr′-lin	Capricorn	kap′-ri-kôrn
Archipelago	är-ki-pel′-a-gō	Biscay	bis′-kā	Caracas	kä-rä′-käs
Arctic	ärk′-tik	Blanco	blän′-kō	Caribbean	kar-i-bē′-an
Argentina	är′-jen-tēn	Bogota	bō-gō-tä′	Carolina	kar-ō-lī′-na
Arizona	ar-i-zō′-nä	Bolivia	bō-liv′-i-ä	Carpathian	kär-pā′-thi-an
Arkansas	är′-kan-sâ	Bombay	bom-bā′	Carpentaria	kär-pen-tā′-ri-a
Asia	ā′-shia	Bordeaux	bor-dō′	Cascade	kas-kād′

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Caspian	kas′-pi-an
Catskill	kats′-kil
Caucasus	kâ′-ka-sus
Cayenne	kā-yen′
Celebes	sel′-e-bes
Ceylon	sē-lon′
Chad	chäd
Champlain	sham-plān′
Charleston	chärlz′-ton
Chesapeake	ches′-a-pēk
Chicago	shi-kä′-gō
Chile	chē′-le
Chimborazo	chim-bō-rä′-zō
China	chī′-nä
Cincinnati	sin-si-nä′-ti
Cleveland	klēv′-land
Colombia	kō-lōm′-bē-ä
Cologne	kō-lōn′
Colorado	kol-ō-rä′-dō
Columbia	kō-lum′-bi-ä
Columbus	kō-lum′-bus
Concepcion	kon-sep′-shon
Connecticut	ko-net′-i-kut
Constantinople	kon-stan-ti-nō′-pl
Copenhagen	kō-pen-hā′-gen
Cuba	kū′-bä
Cuzco	kōz′-kō
Cyprus	sī′-prus
Dahomey	dä-hō′-me
Dakota	dä-kō′-tä
Damascus	da-mas′-kus
Danube	dan′-ūb
Darien	dā′-ri-en
Delaware	del′-a-wār
Denmark	den′-märk
Detroit	de-troit′
Dnieper	nē′-per
Dover	ḍō′-vėr
Dublin	dub′-lin
Dwina	dwē′-nä
Ecuador	ek′-wa-dor
Edinburgh	ed′-n-bur-ō
Egypt	ē-jipt
Elbe	el′-be
England	ing′-gland
English Channel	ing′-glish chan′-el
Erie	ē′-ri
Etna	et′-nä
Euphrates	ū-frā′-tēz
Europe	ū′-rōp
Falkland	fâk′-land
Faroe	fā′-rō
Fezzan	fez-zän′
Fiji	fē′-jē
Finisterre	fin-is-tār
Finland	fin′-land
Florence	flor′-ens
Florida	flor′-i-dä
Formosa	fôr-mō′-sä
France	frans
Freetown	frē′-toun
Friendly	frend′-li
Fundy	fun′-di
Ganges	gan′-jēz
Geneva	je-nē′-va
Genoa	jen′-ō-ä
Georgetown	jôrj′-toun
Georgia	jôr′-jiä
Germany	jėr′-ma-ni
Gibraltar	ji-brâl′-tär
Glasgow	glas′-gō
Greece	grēs
Greenland	grēn′-land
Greenwich	grēn′-ij
Guatemala	gâ-tē-mä′-lä
Guayaquil	gwī-ä-kēl′
Guiana	gē-ä′-na
Habana	hä-vä′-nä
Hague	hāg
Haiti	hā′-ti
Hamburg	ham′-bėrg
Hammerfest	häm′-mer-fest
Havre	ä′-vr
Hawaiian	hä-wī′-yan
Hebrides	heb′-ri-dēz
Hekla	hek′-lä
Himalaya	him-ä′-lä-yä, or him-a-lä′-yä
Hindoostan	hin-dö-stän′
Hobart	hō′-bärt
Hongkong	hong′-kong′
Honolulu	hō-nō-lö′-lö
Hudson	hud′-son
Huron	hū′-ron
Iceland	īs′-land
Idaho	ī′-da-hō
Illinois	il-i-noi′ or -noiz
India	in′-di-ä
Indiana	in-di-an′-ä
Indianapolis	in′-di-a-nap′-ō-lis
Indies	in′-dez
Indo-China	in′-dō-chī′-nä
Indus	in′-dus
Iowa	ī′-ō-wä
Ireland	ir′-land
Italian	i-tal′-yan
Italy	it′-a-li
Jamaica	ja-mā′-kä
Jamestown	jāmz′-toun
Japan	ja-pan′
Java	jä′-vä
Jerusalem	je-rö′-sa-lem
Juan Fernandez	hö-än′ fer-nän′-deth
Kamchatka	käm-chät′-kä
Kamerun	kä-me-rön′
Kansas	kan′-zas
Kara	kä′-rä
Kentucky	ken-tuk′-i
Khartum	kär-tōm′
Kilimanjaro	kil-ē-män-jä′-rō
Kimberley	kim′-bėr-li
Kongo	kon′-gō
Korea	kō-re′-ä
Kristiania	kris-tē-ä′-nē′-ä
Kurile	kö′-ril
Labrador	lab-ra-dôr′
Ladoga	lä′-dō-gä
La Paz	lä päth
Lapland	lap′-land
La Plata	lä plä′-tä
Lena	lē′-nä
Liberia	li-bē′-ri-ä
Lima	lē′-mä
Lisbon	liz′-bon
Liverpool	liv′-ėr-pöl
Llanos	lyä′-nōs
Loire	lwär
Los Angeles	los an′-je-lez
Louisiana	lö-ē-zi-an′-ä
Louisville	lö′-is-vil

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Lowell	lō′-el
Lyon	lē-ôn′
Mackenzie	ma-ken′-zi
Madagascar	mad-a-gas′-kär
Madeira	mä-dē′-rä
Madras	ma-dras′
Madrid	ma-drid′
Magellan	ma-jel′-an
Malacca	ma-lak′-ä
Malay	mā-lā′
Malta	mâl′-tä
Manchester	man′-ches-tėr
Maracaibo	mä-rä-kī′-bo
Marmora	mär′-mō-rä
Marseille	mär-sāl′
Maryland	mer′-i-land
Mashonaland	ma-shō′-nä-land
Massachusetts	mas-a-chō′-sets
Mecca	mek′-ä [an
Mediterranean	med″-i-te-rā′-nē-
Melbourne	mel′-bėrn
Mexico	mek′-si-kō
Michigan	mich′-i-gan
Milwaukee	mil-wâ′-kē
Minneapolis	min-e-ap′-ō-lis
Minnesota	min-e-sō′-tä
Mississippi	mis-i-sip′-i
Missouri	mi-zō′-ri
Mobile	mō-bēl′
Mocha	mō′-kä
Monrovia	mun-rō′-vi-ä
Montana	mon-tä′-nä
Montevideo	mon-te-vid′-ē-ō
Montreal	mont-re-âl′
Morocco	mō-rok′-ō
Moscow	mos′-kou
Murray	mur′-ä
Naples	nā′-plz
Nashville	nash′-vil
Nebraska	nē-bras′-kä
Netherlands	neth′-ėr-landz
Nevada	nē-vä′-dä
Newark	nū′-ärk
Newfoundland	nū′-fund-land
New Guinea	nū gin′-i
New Hampshire	nū hamp′-shir
New Haven	nū hā -vn
New Hebrides	nū heb′-ri-dēz
New Jersey	nū jer′-zi
New Orleans	nū ôr′-le-anz
New York	nū yôrk
New Zealand	nū zē′-land
Niagara	nī-ag′-a-rä
Niger	nī′-jėr
Nile	nīl
Nippon	nip-on′
Norway	nôr′-wā
Nova Scotia	nō′-vä skō′-shiä
Nova Zembla	nō′-vä zem′-blä
Obi	ō′-bē
Oder	ō′-der
Odessa	ō-des′-ä
Ohio	ō-hī′-ō
Okhotsh	o-kotsk′
Oklahoma	ok-la-hō′-mä
Omaha	ō′-ma-hä
Oman	ō-män′
Onega	on′-e-gä
Ontario	on-tā′-ri-ō
Oporto	ō-pōr′-tō
Oregon	or′-e-gon
Orinoco	ō-ri-nō′-kō
Ottawa	ot′-a-wä
Palestine	pal′-es-tīn
Pamir	pä-mēr′
Pampas	pam′-päz
Panama	pä-nä-mä′
Papua	pap′-ö-ä
Paraguay	par′-a-gwī
Paramaribo	par-a-mar′-i-bō
Parana	pä-rä-nä′
Paris	par′-is
Patagonia	pät-ä-gō′-ni-ä
Paterson	pat′-ėr-son
Peking	pē-king′
Pennsylvania	pen-sil-vā′-ni-ä
Penobscot	pe-nob′-skot
Pernambuco	per-näm-bö′-kō
Persia	pėr′-shä
Peru	pe-rö′
Philadelphia	fil-a-del′-fi-ä
Philippine	fil′-ip-in
Pittsburg	pits′-bėrg
Platte	plat
Portugal	pōrt′-ū-gal
Potomac	pō-tō′-mak
Potosi	pō-tō-sē′
Prague	präg
Prussia	prush′-ä
Puerto Rico	pwer′-tō rē′-kō
Puget	pū′-jet
Pyrenees	pir′-ē-nēz
Quebec	kwe-bek′
Queensland	kwēnz′-land
Quito	kē′-tō
Rangoon	rän-gön′
Reykjavik	rīk′-yä″-vik
Rhine	rīn
Rhode Island	rōd ī′-land
Rhone	rōn
Richmond	rich′-mond
Rio Janeiro	rē′-ō zhä-nā′-rō
Rio de la Plata	rē′-ō dä lä plä′-tä
Rio Grande	rē′-ō grän′-dä
Rio Negro	rē′-ō nā′-grō
Rochester	roch′-es-tėr
Rotterdam	rot′-ėr-dam
Rumania	rö-mā′-ni-ä
Russia	rush′-ä
Sacramento	sak-ra-men′-to
Sahara	sa-hä′-rä
St. Augustine	sānt â′-gus-tēn
St. Helena	sānt he-lē′-nä
St. Lawrence	sānt lâ′-rens
St. Louis	sānt lö′-is
St. Paul	sānt pâl
St. Petersburg	sānt pē′-tėrz-bėrg
St. Roque	sānt rōk
Sakhalin	sä-kä-lēn′
Samoa	sa-mō′-ä
San Francisco	san fran-sis′-ko
San Joaquin	sän hō-ä-kēn′
Santa Fé	sän′-tä fā′
Santiago	sän-tē-ä′-gō
Sardinia	sär-din′-i-ä
Savannah	sa-van′-ä
Scandinavia	skan-di-nā′-vi-ä
Seine	sān
Senegal	sen-e-gâl′
Servia	sėr′-vi-ä
Shanghai	shang-hī′
Shannon	shan′-on
Siam	sī-am′

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Siberia	sī-bē′-ri-ä
Sicily	sis′-i-li
Sierra Leone	sē-er′-rä lē-ō′-nē
Sierra Nevada	sē-er′-rä nä-vä′-
Singapore	sing-ga-pōr′ [dä
Sitka	sit′-kä
Smyrna	smėr′-nä
Solomon	sol′-ō-mon
Somali Land	sō-mä′-le land
Spencer	spen′-ser
Stockholm	stok′-hōlm
Strassburg	stras′-bėrg
Suakin	swä′-kin
Sucre	sö′-krā
Suez	sö′-ez
Sumatra	sö-mä′-trä
Sunda	sun′-dä
Sweden	swē′-den
Switzerland	swit′-zėr-land
Sydney	sid′-ni
Syracuse	sir′-a-kūs
Tagus	tā′-gus
Tahlequah	tä-le-kwä′
Tampico	täm-pē′-kō
Tananarivo	tä-nä-nä-rē′-vō
Tanganyika	tän-gän-yē′-kä
Tasmania	taz-mā′-ni-ä
Teheran	teh-e-rän′
Tennessee	ten-e-sē′
Texas	tek′-sas
Thames	temz
Tibet	tib′-et
Tierra del Fuego	tē-er′-rä del fwā′-
Tigris	tī′-gris [gō
Timbuctu	tim-buk′-tö
Titicaca	tē-tē-kä′-kä
Tokyo	tō′-kē-ō
Toledo	tō-lē′-dō
Tonga	tong′-gä
Trinidad	trin-i-dad′
Tripoli	trip′-ō-li
Tunis	tū′-nis
Ural	ö′-ral
Uruguay	ö-rö-gwī′
Utah	ū′-tä
Valdai	väl′-dī
Valparaiso	val-pa-rī′-sō
Vancouver	van-kö′-ver
Van Diemens Land	van dē′-menz land
Venezuela	ven-e-zwē′-lä
Venice	ven′-is
Veracruz	ve′-rä kröz
Vermont	ver-mont′
Vesuvius	ve-sū′-vi-us
Victoria	vik-tō′-ri-ä
Victoria Nyanza	vik-tō′-ri-ä ni-
Vienna	vi-en′-ä [an′-za
Virginia	vėr-jin′-i-ä
Vistula	vis′-tū-lä
Volga	vol′-gä
Wales	wālz
Warsaw	wär′-sâ
Wellington	wel′-ing-ton
Whangho	hwang′-hō
Willamette	wil-ä-met
Winnepeg	win′-i-peg
Wisconsin	wis-kon′-sin
Worcester	wůs′-tėr
Wyoming	wī-ō′-ming
Yangtze	yäng′-tse
Yenisei	yen-ē-sā′-ē
Yezo	yez′-ō
Yokohama	yō-kō-hä′-mä
Yosemite	yō-sem′-i-te
Yucatan	yö-kä-tän′
Yukon	yö′-kon
Zambezi	zam-bē′-zē
Zambezia	zam-bē′-zhiä
Zanzibar	zän-zi-bär′
Zealand	zē′-land

POPULATION OF STATES AND TERRITORIES.

1.	New York	5,997,853	18.	New Jersey	1,444,933	35.	Rhode Island	345,506
2.	Pennsylvania	5,258,014	19.	Kansas	1,427,096	36.	Vermont	332,422
3.	Illinois	3,826,351	20.	Minnesota	1,301,826	37.	South Dakota	328,808
4.	Ohio	3,672,316	21.	Mississippi	1,289,600	38.	Oregon	313,767
5.	Missouri	2,679,184	22.	California	1,208,130	39.	Dist. of Columbia	230,392
6.	Massachusetts	2,238,943	23.	South Carolina	1,151,149	40.	Utah	207,905
7.	Texas	2,235,523	24.	Arkansas	1,128,179	41.	North Dakota	182,719
8.	Indiana	2,192,404	25.	Louisiana	1,118,587	42.	Indian Territory	180,182
9.	Michigan	2,093,889	26.	Nebraska	1,058,910	43.	Delaware	168,493
10.	Iowa	1,911,896	27.	Maryland	1,042,390	44.	New Mexico	153,593
11.	Kentucky	1,858,635	28.	West Virginia	762,794	45.	Montana	132,159
12.	Georgia	1,837,353	29.	Connecticut	746,258	46.	Idaho	84,385
13.	Tennessee	1,767,518	30.	Maine	661,086	47.	Oklahoma	61,834
14.	Wisconsin	1,686,880	31.	Colorado	412,198	48.	Wyoming	60,705
15.	Virginia	1,655,980	32.	Florida	391,422	49.	Arizona	59,620
16.	North Carolina	1,617,947	33.	New Hampshire	376,530	50.	Nevada	45,761
17.	Alabama	1,513,017	34.	Washington	349,390	51.	Alaska	32,052

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POPULATION OF CITIES OF THE UNITED STATES ABOVE 75,000.

CENSUS OF 1890.

New York, N.Y.	1,515,301	Washington, D.C.	230,392	Indianapolis, Ind.	105,436
Chicago, Ill.	1,099,850	Detroit, Mich.	205,876	Allegheny, Pa.	105,287
Philadelphia, Pa.	1,046,964	Milwaukee, Wis.	204,468	Albany, N.Y.	94,923
Brooklyn, N.Y.	806,343	Newark, N.J.	181,830	Columbus, Ohio	88,150
St. Louis, Mo.	451,770	Minneapolis, Minn.	164,738	Syracuse, N.Y.	88,143
Boston, Mass.	448,477	Jersey City, N.J.	163,003	Worcester, Mass.	84,655
Baltimore, Md.	434,439	Louisville, Ky.	161,129	Toledo, Ohio	81,434
San Francisco, Cal.	298,997	Omaha, Neb.	140,452	Richmond, Va.	81,388
Cincinnati, Ohio	296,908	Rochester, N.Y.	133,896	New Haven, Conn.	81,298
Cleveland, Ohio	261,353	St. Paul, Minn.	133,156	Paterson, N.J.	78,347
Buffalo, N.Y.	255,664	Kansas City, Mo.	132,716	Lowell, Mass.	77,696
New Orleans, La.	242,039	Providence, R.I.	132,146	Nashville, Tenn.	76,168
Pittsburg, Pa.	238,617	Denver, Col.	106,713	Scranton, Pa.	75,215

AREAS OF CONTINENTS AND OCEANS.

Asia	17,256,000	Europe	3,782,000	Indian	23,000,000
Africa	11,509,000	Australia	2,945,000	Antarctic	7,000,000
North America	8,892,000	Pacific	70,000,000	Arctic	4,000,000
South America	6,835,000	Atlantic	35,000,000	Inland Waters	750,000

LAND AREA OF STATES AND TERRITORIES OF THE UNITED STATES.

		Square Miles			Square Miles			Square Miles
1.	Alaska	531,409	18.	Missouri	68,735	35.	Virginia	40,125
2.	Texas	262,290	19.	Washington	66,880	36.	Kentucky	40,000
3.	California	155,980	20.	Georgia	58,980	37.	Oklahoma	38,830
4.	Montana	145,310	21.	Michigan	57,430	38.	Indiana	35,910
5.	New Mexico	122,460	22.	Illinois	56,000	39.	Indian Territory	31,000
6.	Arizona	112,920	23.	Iowa	55,475	40.	South Carolina	30,170
7.	Nevada	109,740	24.	Wisconsin	54,450	41.	Maine	29,895
8.	Colorado	103,645	25.	Florida	54,240	42.	West Virginia	24,645
9.	Wyoming	97,575	26.	Arkansas	53,045	43.	Maryland	9,860
10.	Oregon	94,560	27.	Alabama	51,540	44.	Vermont	9,135
11.	Idaho	84,290	28.	North Carolina	48,580	45.	New Hampshire	9,005
12.	Utah	82,190	29.	New York	47,620	46.	Massachusetts	8,040
13.	Kansas	81,700	30.	Mississippi	46,340	47.	New Jersey	7,455
14.	Minnesota	79,205	31.	Louisiana	45,420	48.	Connecticut	4,845
15.	South Dakota	76,850	32.	Pennsylvania	44,985	49.	Delaware	1,960
16.	Nebraska	76,840	33.	Tennessee	41,750	50.	Rhode Island	1,085
17.	North Dakota	70,195	34.	Ohio	40,760	51.	District of Columbia	60

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